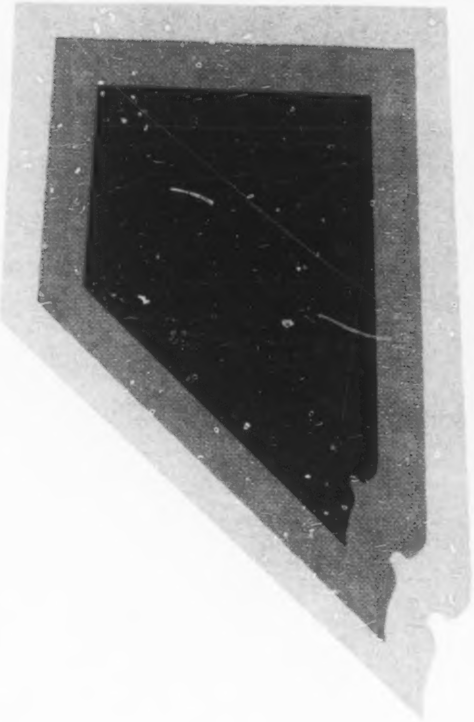
2/4/85 U7920-1 A



# NEVADA REVIEW of BUSINESS & ECONOMICS

## FALL 1984

*Bureau of Business & Economic Research*
*College of Business Administration*
*University of Nevada, Reno*

# NEVADA REVIEW of BUSINESS & ECONOMICS

UNIVERSITY OF NEVADA, RENO
Joseph N. Crowley, *President*

COLLEGE OF BUSINESS ADMINISTRATION
Richard E. Hughs, *Dean*

BUREAU OF BUSINESS AND ECONOMIC RESEARCH
James L. Walker, *Director*
Albin J. Dahl, *Editor*
Samuel Males, *Operations Manager*

Carol Koletar
*Secretary*

Sherrie Bianco
*Clerical Assistant*

Glen Atkinson
*Research Faculty*

Thomas F. Cargill
*Research Faculty*

John L. Dobra
*Research Faculty*

William R. Eadington
*Research Faculty*

Gano S. Evans
*Research Faculty*

Kyung-Il (Ed) Ghymn
*Research Faculty*

Winnie Moore
*Research Assistant*

James Newman
*Research Assistant*

Nevada Review of Business and Economics
A Quarterly Publication
(ISSN 0148-5881)

Copyright 1984 by
The Bureau of Business and Economic Research
University of Nevada, Reno

POSTMASTER:

Please send Form 3759 to:

Bureau of Business and Economic Research
University of Nevada, Reno
Reno, NV 89557-0016

Phone: (702) 784-6877

Second Class Postage Paid at Reno, NV.

# In This Issue

**Fall 1984** **Volume VIII, No. 3**

The Truth About Death and Taxes In Nevada Revisited .......... 2
*Albin Dahl*

Academic Excellence: An Achievable Goal For the University of Nevada, Reno? .......... 11
*Michelle I. Austin*

Pricing As A Conservative Practice of Nevada Water Companies: A Survey .......... 19
*Donald E. Agthe and Kambiz Raffiee*

Nevada Economic Indicators

- Statewide Statistical Data .......... 24
- Las Vegas SMSA Data .......... 26
- Reno SMSA Data .......... 27
- Nevada Statistical Data by County .......... 28

Selected U.S. Economic Indicators .......... 31

---

## EDITORIAL REVIEW BOARD

Glen Atkinson
University of Nevada, Reno

William Bible
Nevada State
Budget Director

Ben Dasher
Universe Life Insurance Co.

Gano S. Evans
University of Nevada, Reno

B. J. Fuller
University of Nevada, Reno

Andrew Grose
Chief of Staff
Governor's Office
State of Nevada

Bernard Malamud
University of Nevada, Las Vegas

John Nellor
University of Nevada, Reno

Robert C. Weems
University of Nevada, Reno

Sam E. White
University of Portland
Portland, Oregon

Richard E. Wilson
University of Nevada, Reno

Don W. Winne
University of Nevada, Reno

Betty Yantis
University of Nevada, Las Vegas

---

In an effort to assure that the articles appearing in the *Review* meet standards which are consistent with the goals of the College of Business Administration and the University of Nevada, Reno, the Editorial Review Board has been created to referee manuscripts submitted for publication. All articles which pertain to the business and economic environment of Nevada and are of a high quality will be considered for publication. All manuscripts should be addressed to the Editor, *Nevada Review of Business and Economics,* Bureau of Business and Economic Research, University of Nevada, Reno, Reno, Nevada 89557-0016.

# The Truth About Death and Taxes In Nevada Revisited

*By Albin Dahl**

"The Truth About Death and Taxes in Nevada," was published in the Winter 1978-79 issue of this Journal (V.II, No. 4). A copy of the aforementioned article was introduced as *Exhibit C* in the Nevada Legislative hearings of the Senate Committee on Taxation dealing with the estate tax, March 8, 1979. Nearly six years have passed since that time, and Nevada is still the only state that does not "pick-up" the federal estate tax credit. Therefore, the author perceived a need to explain and defend the proposed Nevada estate tax in much greater depth than in his earlier article, in a revisit to *death and taxes.*

We begin with a definition of an estate tax, consider the rationale of death taxes and review their recent history. A technical explanation of the federal estate tax is included in the introductory presentation. The perennial arguments against a Nevada "pick-up" estate tax are scrutinized. The purpose is to show that levying this kind of a limited scope estate tax would be prudent fiscal management and is no way a deterrent to Nevada residency of wealthy persons because the proposal to "pick-up the federal estate tax credit" by providing for a state of Nevada estate tax does not add one penny to death taxes.

### The Difference Between An Estate Tax and An Inheritance Tax

An estate tax is levied on the net asset value of the estate of a decedent. Funds and value of property available for distribution to heirs are reduced by the amount of the estate tax liability. Inheritance taxes are assessed to heirs of a decedent's estate and the schedule of rates varies directly with the remoteness of the relationship (if any) of the heir to the decedent. Thus the schedule of inheritance tax rates payable by a son or daughter is below that payable by a nephew or niece of the decedent. The highest rates are payable by beneficiaries ("strangers") having no blood relationship to the decedent. The distinction between an estate and an inheritance tax becomes blurred if the code provides for estate tax exemptions which vary according to the relationship of the heirs to whom net proceeds or title to property is to be transferred. For example, the federal estate tax code and that of several states grant a sizeable exemption from tax liability applicable to property to be transferred to a surviving spouse. By contrast, at their discretion, lawmakers may provide for full taxation (without any exclusion) of estate property destined for transfer to a stranger or to a distant relative. Because there is no hard line separating estate from inheritance taxes, the broader term *death taxes* is often an appropriate substitute phrase.

### What Is Fair?

In *Utopia* there are no taxes, but no one has been able to find a 20th century utopia. Meanwhile, scholars argue *pro* or *con* the merits or demerits of various types of taxes. A perfect balance between "progressive" and "regressive" taxes is the closest approach to a "fair" tax structure. But this perfect balance is rarely, if ever, reached.

Nevada conservatives generally oppose death taxes and rationalize their opposition to the proposed "pick-up" estate tax partly on grounds that all death taxes are "unfair." For example, spokespersons for Nevada bankers ". . . oppose . . . estate taxes, inheritance taxes and other forms of death taxation, because they unfairly punish those who have the ability to manage their affairs and accumulate what government terms 'excess wealth.' Abusives may exist, but the majority of the so-called wealthy have been paying their fair share and more for a long time. If legislators are worried about redistribution, they shouldn't be, for there are more than enough improvident spouses, sons and daughters among the survivors to assure equalization of wealth eventually. I simply perfer to let it all happen in that manner than having the government tell me what is good and bad."[1]

On the other hand, scholars have rationalized death taxes as a substitute for the decedent's obligation for helping needy people, inasmuch as provision for social welfare is essentially a responsibility of the state.[2] This rationale implies that the decedent's charitable contributions during his or her lifetime were inadequate measured by some imaginary standard and that surplus wealth was accumulated. Death taxes make the state one of the beneficiaries of decedents who leave tangible wealth and this is entirely just and proper, according to this "social welfare" rationale.

In modern literature on "death and taxes," scholars have noted that the estate tax has a light incidence. Along this line

---

**Albin Dahl is Professor of Economics, College of Business Administration, University of Nevada, Reno.*

*The author wishes to thank John M. Strefeler, Associate Professor of Accounting and Information Systems, also at UNR, for reviewing specific portions of this article for compliance with federal tax laws. The author assumes responsibility for possible errors.*

of thought, it is pointed out that death taxes impose less disincentive to work than is imposed by the income tax and that the adverse effect of death taxes on risk-bearing and allocation of economic resources is minimal.[3]

Death and gift tax rates, like those applicable to income, are "progressive," i.e., rates increase with dollar value subject to taxation. The federal estate tax rates are steeply progressive, reaching 55 percent on estates of taxable value of over $15 million; the maximum rate will drop to 50 percent in 1988. "It is only the uninformed, the ill-advised, or the altruistic individual who would not subject an estate [of this value size category] to . . . high [death taxes] as it passes from one generation to the next."[4]

It is notable, however, that a wealthy individual can resort to various devices for avoiding taxes legally, e.g., by establishing a living trust to avoid estate and/or inheritance taxes.

By contrast, taxation at flat rates is "regressive" on low wealth/income individuals. The sales tax and property taxes are regressive, i.e., the same rates apply irrespective of financial status of taxpayers. But the incidence of the flat rate tax bill falls heavier on the poor than on the rich. The dollar amount of a tax bill at a flat rate is a small percentage of wealth and income or a rich person, but for a poor person, the comparable percentage is much higher.

Apparently some investors retain ownership of assets which have appreciated in value until time of death in order to avoid liability for the capital gains tax. The overall effect of this tendency is to impede the mobility of capital. By taxing transferred assets at market values as of date of death, inheritance and/or estate taxes have the effect of reaching capital gains which otherwise might never be reached. Death taxes also reach the market value of bonds which are exempt from the tax on interest earned.

Whether death taxes are "fair" or "unfair" is a philosophical issue not amenable to reconciliation. However, the fairness issue has no more than a tangential relationship to the theme of this article, viz., that Nevada should join the other 49 states in "picking-up" the credit allowable on the federal estate tax return.

**Estate Tax Revenue Sharing**

Financial exigencies of the Civil War led Congress to impose death taxes but they were repealed in 1870. Subsequently states began to levy death taxes and by 1916 they yielded 8.2 percent of treasury revenue in 42 states. Then fiscal needs of the federal government during World War I prompted Congress to levy death taxes again, and this time they became firmly embedded in federal tax structure.

Death and gift taxes are *indirect* because technically they apply to transfer of property rather than to property *per se.* Therefore, unlike taxes on income, estate and gift taxes levied by the federal government could not be challenged at law as offending the Constitutional ban on the imposition of direct taxes.[5] But the federal estate tax did arouse some controversy. It was argued that making rules and regulations relating to transfer of ownership of property is entirely within the province of states and therefore the levy of death taxes should be the exclusive preserve of states. However, the consensus at law was that the observed legislative power of the states did not preclude federal taxation of transfer of property.

In 1924 Congress decided to compromise the issues of who (federal or state government) shall levy death taxes by providing for sharing federal estate tax revenue with states. Therefore, in tax revision legislation of that year, Congress allowed states which also levy an estate or inheritance tax a credit equal to 25 percent of the effective federal estate tax rate multiplied by the total federal estate tax liability. In 1926 this revenue sharing rate was increased to 80 percent. In 1932, Congress raised estate tax rates but provided that the 80 percent credit to states should continue to be based on 1926 federal estate tax effective rates. Subsequently Congress increased estate tax rates again in 1935, 1940 and 1941. The federal estate tax exemption, $100,000 in 1926, was reduced to $50,000 in 1932 and to $40,000 in 1935. The $40,000 exemption was raised to $60,000 in 1942 only because a special life insurance exclusion of $40,000 was eliminated.

The Tax Reform Act of 1976 substituted a uniform credit for the $60,000 exemption. For estates of decedents dying in 1977 and thereafter, the credit is phased in as follows:[6]

| Year | Credit | "Equivalent" Exemption |
|---|---|---|
| 1977 | $30,000 | $120,666 |
| 1978 | 34,000 | 134,000 |
| 1979 | 38,000 | 147,333 |
| 1980 | 42,500 | 161,563 |
| 1981 | 47,000 | 175,625 |
| 1982 | 62,800 | 225,000 |
| 1983 | 79,300 | 275,000 |
| 1984 | 96,300 | 325,000 |
| 1985 | 121,800 | 400,000 |
| 1986 | 155,800 | 500,000 |
| 1987 and thereafter | 192,800 | 600,000 |

An "equivalent" exemption of $120,666 indicates that a federal estate tax return must be filed for a gross estate exceeding $120,000. As indicated by the tabulation, the equivalent exemption rises in steps to 1987. Therefore as of 1987 and thereafter, only the administrator of estates exceeding $600,000 in gross value would be required to file a federal estate tax return.

Although the Act of 1976 provides for a substantially higher exemption, it also raised estate tax rates at the lower end of the scale and lowered them for the very high value estates. The new rates are in the range of 18 percent to 55 percent compared with a previous spread of three percent to 77 percent.

The method of calculating the maximum credit allowable to states is illustrated on page 4:[7]

As indicated by the tabulation, if the taxable estate is less than $40,000, the credit for state death taxes is zero.

Assume a taxable estate of $150,000. The nearest applicable figure in column (A) of the table is $140,000, for

**Table for Computation of Maximum Credit For State Death Taxes**

| (A)<br>Taxable estate equal to or more than - | (B)<br>Taxable estate less than - | (C)<br>Credit on amount in column (A) | (D)<br>Rates of Credit on excess over amount in column (A) Percent |
|---|---|---|---|
| $ 40,000 | $ 90,000 | ..... | 0.8 |
| 90,000 | 140,000 | 400 | 1.6 |
| 140,000 | 240,000 | 1,200 | 2.4 |
| 240,000 | 440,000 | 3,600 | 3.2 |
| 440,000 | 640,000 | 10,000 | 4.0 |
| 640,000 | 840,000 | 18,000 | 4.8 |
| 840,000 | 1,040,000 | 27,600 | 5.6 |
| 1,040,000 | 1,540,000 | 38,800 | 6.4 |
| 1,540,000 | 2,040,000 | 70,800 | 7.2 |
| 2,040,000 | 2,540,000 | 106,800 | 8.0 |
| 2,540,000 | 3,040,000 | 146,800 | 8.8 |
| 3,040,000 | 3,540,000 | 190,800 | 9.6 |
| 3,540,000 | 4,040,000 | 238,800 | 10.4 |
| 4,040,000 | 5,040,000 | 290,800 | 11.2 |
| 5,040,000 | 6,040,000 | 402,800 | 12.0 |
| 6,040,000 | 7,040,000 | 522,800 | 12.8 |
| 7,040,000 | 8,040,000 | 650,800 | 13.6 |
| 8,040,000 | 9,040,000 | 786,800 | 14.4 |
| 9,040,000 | 10,040,000 | 930,800 | 15.2 |
| 10,040,000 | ..... | 1,082,800 | 16.0 |

which the tentative credit to the state is $1,200, as shown in column (C). But the taxable estate ($150,000) exceeds $140,000 of column (A) by $10,000. Therefore, 2.4 percent (column D) of $10,000, or $240, is added to the tentative credit of $1,200 to arrive at a total credit of $1,440. The credit of $1,440 is .9 percent of the $150,000 taxable value of the estate. The credit allowable to a state on an estate of $700,000 taxable value would be approximately 3 percent thereof. Therefore the credit allowable to states varies from less than 1 percent at the lowest level and rises to 16 percent for estates of taxable value exceeding $10 million.

The rebate currently allowable to states averages 10 percent of federal estate tax revenue. To illustrate, assume a federal estate tax liability of $4.0 million and that the IRS determines a potential credit of 10 percent thereof equal to $400,000, deductible on the federal estate tax return. If a state collects the full $400,000 (by means of levying a state estate tax) the total federal estate tax would be $3.6 million. But if no state claims and collects the $400,000 potential credit, the $400,000 would go to the IRS. The federal estate tax liability would be $4.0 million (instead of $3.6 million). Therefore the federal estate tax liability of the estate of the decedent is not affected by a strictly "pick-up the federal credit" estate tax levied by a state.

Forty-four states have qualified for the federal estate tax credit by imposing inheritance or estate taxes of their own, thus adding to the federal death tax burden. But a state legislature *can* provide for an estate tax without imposing any additional tax liability on estates within its jurisdiction. To qualify for revenue sharing, a state must levy and collect an estate tax but may limit the amount of the tax to the potential credit allowable as a deduction on the federal estate tax return, hence, the phrase "pick-up" estate tax.

Five states, viz., Alabama, Alaska, Arkansas, Florida, and Georgia, have enacted qualifying innocuous "pick-up the federal rebate" estate tax legislation. If Nevada were to follow suit, estates subject to this state's jurisdiction would pay no additional tax. But the state treasury would qualify for federal estate tax revenue sharing.

### No Death Taxes of Any Kind in Nevada by State Constitutional Ban (1942)

In the early decades of this century when all of Nevada was sparsely populated and ownership of corporate assets was concentrated in relatively few nonresident wealthy persons, it was recognized that an inheritance tax would yield substantial revenues per resident of the state. Therefore, in 1913 the Legislature provided for an inheritance tax with rates varying directly with the value of the property to be inherited and the remoteness of the relationship between the beneficiary and the testator. Twenty percent of the tax dollars collected was allocated to counties in which inherited property was situated and the remaining 80 percent was retained by the state treasury. But there were large yearly swings in inheritance tax revenue collected. In 1914 revenue from this source was $123; this compared with $57,594 in 1921, and a yearly average of $7,002. These sharp fluctuations were viewed with apprehension by lawmakers because handsome budgets in anticipation of income from the inheritance taxes which failed to materialize might lead to increases in other taxes in years of lean revenue from the former.

In 1925 the 32nd session of the Nevada Legislature repealed the Act of 1913 which had established an inheritance tax. As we have already seen, in the following year Congress raised the estate tax credit for states to 80 percent of the percentage of the 1926 tax rates. Nevertheless, after the elapse of many years, a resolution prohibiting enactment of an inheritance or estate tax was approved by the 39th session of the Nevada Legislature, 1939. The first step in the process of writing the ban on death taxes into the Constitution by the amendment process had been taken. At the next session of the Legislature, 1941, the anti-death tax resolution was affirmed. In 1942 the proposed amendment was approved by the electorate. Thus Article 10, Section 1 of the Nevada Constitution provides that "no inheritance or estate tax shall ever be levied . . ."

Providing for an estate tax to permit Nevada to follow in the footsteps of Alabama, Alaska, Arkansas, Florida, and Georgia and pick up federal money without imposing any additional death tax has been discussed at every regular session of the Nevada Legislature since 1961. Each time the strictly revenue-sharing intent of the proponents of the "pick-up" the federal credit estate tax was made clear: the estate tax to be collected by the Department of Taxation shall not exceed the allowable federal credit.

### Recent Legislative History of the Estate Tax

In 1971 and again in 1973, a joint resolution of the Nevada Legislature to amend Article 10, Section 1 of the State Constitution to permit the lawmakers to levy a "pick-up" estate tax passed the Senate but died in committee in the Assembly.

The 59th session of the Legislature (1977) took no action on Senate Joint Resolution No. 5 of the 58th session (1975) which in essence was identical to the previous resolutions dealing with amending Article 10, Section 1. Therefore, the process of amending the Nevada Constitution to provide for a revenue sharing estate tax had to begin all over again in 1979. Senate JR No. 6 approved by the 60th session of the Legislature (1979) was identical to JR 5 of the 58th session. The full text of SJR No. 6 is reproduced as follows: SENATE JOINT RESOLUTION — Proposing to amend article 10 of the constitution of the State of Nevada, relating to taxation, by authorizing the imposition of an estate tax not greater than the credit allowable for such a tax against the federal estate tax, reduced by the amount paid to any other state.

Resolved by the Senate and Assembly of the State of Nevada, jointly, that article 10 of the constitution of the State of Nevada be amended by adding thereto a new section which shall read as follows: The legislature may provide by law for the taxation of estates taxed by the United States, *but only to the extent of any credit allowed by federal law for the payment of such a state tax.* The combined amount of these federal and state taxes may not exceed the estate tax which would be imposed by federal law alone. If another state of the United States imposes and collects death taxes against an estate which is taxable by the State of Nevada under this section, *the amount of estate tax to be collected by the State of Nevada must be reduced by the amount of the death taxes collected by the other state.* Any lien for the estate tax attaches no sooner than the time when the tax is due and payable, and no restriction on possession or use of a decedent's property may be imposed by law before the time when the tax is due and payable. The State of Nevada shall accept the determination of the United States of the taxable estate without further audit.

In imposing the amending resolution, the lawmakers *retained* the prohibition on levying an inheritance tax. The article will continue to provide that "no inheritance tax shall ever be levied."

A proposed amendment to the State Constitution, originating in the Legislature, must be approved by a joint resolution of both houses at two regular consecutive sessions of the Legislature, and then the proposed amendment must be approved by the electorate in a referendum vote.

SRJ No. 6 clearly specified that the Nevada estate tax would be limited to the credit allowed by federal law. The IRS recognizes one credit, but it may be shared by the states in which a resident or nonresident had possessed wealth. Often Nevada residents and nonresidents possess wealth in other states, especially in the contiguous states (California, Oregon, Idaho, Utah and Arizona). All western states (except Alaska) levy inheritance or estate taxes in excess of the federal "pick-up" credit. Therefore if any such state (or groups of states) claims the federal credit, the Nevada treasury would not pick-up any estate tax revenue at all, according to the interpretation of the clause "reduced by the amount of death taxes collected by the other states."

If an estate has multi-state holdings, the executor of the estate would apportion the credit to each state based on the value of the decedent's property in each of the states. Therefore, a number of states may share the federal estate tax credit.

### Police Action?

Opponents of SJR No. 6 have alleged that if Nevada had an estate tax, the state would serve as a "policeman for the IRS." The composers of SJR No. 6 sought to allay possible apprehensions of this kind by providing that "any lien for the [Nevada] estate tax attaches [only when] the tax is due and payable." Also "no restriction on possession or use of a decedent's property may be imposed by law before the time when the tax is due and payable." Therefore, the Legislature could not authorize the Department of Taxation to freeze joint tenancy or individually-held bank accounts or order safe deposit boxes in Nevada sealed upon the death of a Nevada resident.

Senator Don Ashworth, a tax attorney, pointed out that many wealthy individuals who are Nevada residents hold property in joint tenancy with residents of California, Oregon, Utah, and/or other states which levy death taxes. "Keep in mind," he said, "it is the *state,* that steps in and closes these accounts, not the federal government."[8] Certainly, Nevada is not going to perform a policing function for either another state or the federal government.

But if Nevada levied a "pick-up" estate tax, *is it possible* that the state would "police" to ensure that the Nevada Treasury received its share of the federal estate tax, i.e., police on behalf of its own Treasury? Suppose the executor of an estate of a Nevada resident paid the entire estate tax to the IRS ". . . the state would not get [the pick-up money] unless the state . . . asked for it. So, in essence, we have to start policing our own people and might have to hire staff in the state to do that."[9]

In reply, a spokesman for the IRS explained that if the line, "credit for state death taxes," on the federal estate tax return is left blank or if "zero" is inserted, the tax form might be returned to the executor of the estate by the Internal Revenue Service Center with a form letter asking why the deduction for the credit was not taken, assuming that the relevant state or states levies an estate tax. Also, each state which imposes an estate tax may have an agreement with the IRS providing that the state treasury shall receive a copy of every federal estate tax return filed in which the state may have an interest.[10] Therefore state government would have no reason for policing residents or (nonresidents with taxable property in the state) in the matter of the "pick-up" estate tax. Moreover, in Nevada, where the number of estates subject to taxation is in the range of 250 to 350 per year, the processing costs under the worst possible scenerio would be minimal. The normal routine is that the credit for the estate "pick-up" tax paid to a state is deducted on the federal estate tax return and is allowed by IRS, subject to the provision that the executor must submit evidence of payment of a state estate tax within four years of filing the federal return. This is intended to safeguard against cheating in filing the federal estate tax form and also to discourage possible inefficiency by state tax collectors. The IRS wants to be certain that state government actually receives the money for the allowable credit. If the IRS does not receive evidence of payment of an estate tax to a state within the four-year time period, the IRS will send the executor of the estate a bill for an unallowable deduction. But normally an estate "pick-up" tax levied by a state is paid before the federal estate tax return is filed and the receipt therefor is submitted with the federal form to verify the allowable tax credit deduction.

Yet in 1981, during the continuing debate on the proposed Nevada "pick-up" estate tax, Ray Knisley expressed apprehension that " . . . the Legislature *could possibly* enact a provision freezing bank accounts and [sealing] safe deposit boxes. Enforcement *will require* [sic] a full police effort. The only reason the federal government allows the [credit] . . . is to make the state a policeman for the federal government."[11]

Mr. Knisley completely disregarded the testimony of Senator Don Ashworth at the 1979 legislative hearings on the "pick-up" estate tax. As we have already noted, the Senator explained that the *federal government* does *not* freeze bank accounts nor seal safe deposit boxes upon the death of an individual. And as we have already seen, JR No. 6 contains safeguards to protect the financial integrity of estates by banning premature liens and prohibiting restrictions on possession or use of a decedent's property.

After the amending process is completed, it is virtually certain that the Nevada Legislature will compose a statute levying the "pick-up" estate tax. The 61st session of the Legislature (1981) attempted to enact "enabling" legislation so that once the Constitutional barrier has been swept away, implementation would have been provided for, thus permitting Nevada to take advantage of the estate tax revenue sharing without further delay.[12] But the attempt to enact "pick-up" federal revenue enabling legislation failed because: (1) the effort was started late in the legislative session (May, 1981); (2) many lawmakers regarded the proposed legislation as premature; (3) there was considerable wrangling over the appropriate phraseology. However, apparently a Nevada "pick-up" the credit estate tax law should be modeled after those in the five states which already have this kind of legislation.

### Minimal Administration Costs

Finally, the proposed amendment providing for the "pick-up" estate tax states very clearly that ". . . Nevada shall accept the determination of the United States of the taxable estate without further audit."

The one who files the federal estate tax return (executor, tax attorney, accountant) determines gross property values and net taxable values. These valuations are subject to audit by the IRS. The "pick-up" credit is a percentage of the net taxable value (as noted above). The preparer of the federal estate tax return deducts the credit on the federal form and pays the "pick-up" to the state. The credit is an allowable deduction on the federal form. Presentation of receipt for payment of the "pick-up" to the state treasury is required, as already noted.

The Nevada lawmakers made it clear that they have in mind a *one page* estate tax return patterned after that in use by other states providing only for picking up the federal credit. For example, the estate tax return filed with the Department of Finance and Administration of the state of Arkansas consists of only one page. The Arkansas administrators even offer to accept a copy of the federal estate tax return in lieu of the state's one-page form. Therefore, the cost of administering a "pick-up" estate tax is extremely minimal. Four of the five states which "pick-up" the federal estate tax credit administer it with no more than one person. Florida audits only for the protection of the tax payer. Even in Florida, the ratio of federal estate tax revenue "picked-up" to administrative expenses is 344:1.[13] The ratio of revenue to administrative cost varies considerably among the five states that have enacted "pick-up" estate tax laws. In 1978 Georgia "picked-up" federal estate tax credits totaling approximately $8 million with administrative costs of only $29,000, a ratio of revenue to administrative cost of 403 to 1. In that same year, Arkansas "picked-up" $2.5 million and the administrative cost was $65,000, a ratio of 39 to 1.[14]

It was indicated at the Nevada legislative hearings that the five states which administer only a "pick-up" estate tax do so with the half-time services of one clerk.

In Arkansas the executor, his accountant or attorney (1) provides the tax collector with identifying information (date of death, name of deceased, etc.), (2) inserts dollar values in only five blank spaces, and (3) signs the tax return. The dollar values required are taken from the 30-page federal estate tax form, as illustrated on page 7:[15]

Nevertheless, at the 1981 legislative hearings on the proposed Nevada "pick-up" estate tax, Ray Knisley asserted that it "would cost a great deal in accounting and legal fees [sic]."[16]

### The Bankers Association

According to John Cockle, spokesman for the Nevada Bankers Association (Trust Division), the "adamant position of Nevada against . . . death taxes of any sort" perennially has attracted wealthy individuals to Nevada. Mr. Cockle asserted that "many wealthy people move to [Nevada] not only for the climate and quality of life, but because it has taken [such] a positive stance against death taxes . . . that it prohibits any death taxes, even those that would otherwise go to the federal government."[17]

"What I am saying is . . . that by being the sole state that does not have a pick up tax we gain a degree of notoriety . . . those people moving in believe we are more adamant against death taxes than any other state. They are inclined to take that into consideration in choosing their domicile."[18]

Total value of real estate in Arkansas as valued in Federal Report .................................. $__________

Total value of real estate in other states ................................................................. $__________

(a) Give name of State and value in each state: ______________________________

(Give same value as in Federal Return) ______________________________

______________________________

______________________________

Total value of personal property of every kind in
Arkansas as valued in Federal Report ...................................................................... $__________

Total value of personalty in other states ................................................................... $__________

(1) Give name of State and value in each state: ______________________________

______________________________

______________________________

Credit Allowable for State Death ............................................................................ $__________
Tax as per Federal Return

I hereby represent the above information as true and correct to the best of my knowledge and belief, this the

__________ day of ______________________________ , 19 ______.

______________________________
Administrator ( ) Executor ( ) Legal Representative ( )

---

Mr. Cockle continued, wealthy individuals "will say [Nevada] is a state I can rely on . . . [it] is a state that is not going to take advantage of me once I [become a resident]."[19] Moreover, Nevada is most "likely [to be] free of death taxes when I die . . ."[20]

The error of logic in the above is obvious. If Nevada were to provide for a "pick-up" estate tax, then every state in the Union would have either a "pick-up the federal credit" law, or an inheritance or estate tax greater than the credit. Wealthy people would continue to regard Nevada as a tax haven, especially since the state does not levy either a personal or corporate income tax.

From this weak premise, Mr. Cockle concluded that the state Constitution should not be amended to provide for the estate "pick-up" tax, because wealthy people would perceive that the Nevada Constitution can be changed to provide for additional tax revenue[21] (in this instance, revenue sharing with the IRS). This writer adds the comment that if at long last (e.g., in 1986), Nevada begins to levy an innocuous "pick-up" estate tax, wealthy people would observe the object lesson: it took 25 years for the Legislature to get permission to *require* executors of estates (or their proxies) to write a check or money order payable to the Nevada tax collector for a 10 percent credit deductible on the federal estate tax form. (What the executor pays with the left hand he or she gets back with the right hand.)

### A Game of Words

During the many years of debate on the estate "pick-up" tax the argument has become commonplace that the "pick-up" would prevent wealthy people from moving [to Nevada] and donating millions to worthwhile projects. "[Opponents] point to the Fleischmann Foundation and the Howard Hughes donations and say that the state might have lost their aid if it collected its share of the federal [estate] tax."[22] Wealthy individuals and their attorneys, accountants and/or tax consultants certainly are not naive; they know that a state "pick-up" estate tax adds nothing to death tax liabilities. Apparently this is a "bottom line" consideration in determining whether to become a Nevada resident.

Spokespersons representing the views of the Bankers' Association argue that a state "pick-up" estate tax would vitiate their alleged venerable claim that Nevada has no death taxes of any kind. Nevada's "no-death taxes" commercial is misleading because it implies that death taxes are lower in Nevada than in the five aforementioned "pick-up the credit" states. Therefore Nevada's proposed "pick-up" estate tax would not tarnish the state's *no tax image.* There is a strong presumption that wealthy people, especially those who are long-time residents of Nevada, would want some of their federal estate tax money to go to their adopted (or native) state. The "pick-up" estate tax, if levied by Nevada, would make this possible. The Bankers Association *could* come to grips with reality, recognize this welcome by-product of the "pick-up" tax, and advertise it as a positive advantage.

At the 1979 legislative hearings, Mr. Mann urged the Nevada bankers to abandon their obstructionist tactics and take a cue from their colleagues in Florida. "[Florida bankers] are saying that [they] still have no estate tax." They call the "pick-up" tax a "sponge tax." "It is a game of words."[23]

The analogy is excellent. The "pick-up" tax absorbs *would be* federal money; subsequently state and local governments benefit from revenue sharing when money is squeezed out of the sponge. The Florida *tax break* image "has been attracting a staggering number of middle-aged Americans who might be characterized as millionaires."[24]

According to a Florida estate tax lawyer: "There [is] an incredible number of retirement residents coming in here with $1 million or $2 million. Then [there are] people with estates of eight or 10 figures [who have] vacation homes here . . . [they] are switching domiciles here also."[25]

"It adds up to an atmosphere of intense competition among Florida lawyers, banks and trust companies for the management fees on a growing pot of fat portfolios and trusts."[26]

### Another Way?

After many years of debate, sometimes acrimonious and sometimes dilatory, on the issue of the "pick-up" estate tax, it is conceivable that federal estate tax credits could be "picked-up" by Nevada (and other states) in a manner pleasing to the most politically ultraconservative residents of Nevada. An amendment to section 2011 of the Internal Revenue Code was composed in 1983 providing that the administrator of an estate may elect, at his/her discretion, to donate a sum of the estate's money to the general fund of a state. This *gift to the state* would then be deductible on the federal estate tax return. The state treasury would "pick-up" estate tax revenue that otherwise would go to the IRS.[27] The need to amend the Nevada Constitution to permit levying a "pick-up" estate tax would be obviated. The voluntary feature of this approach to sharing estate tax revenue with the federal government appeals to political conservatives. However, Congressional action on such an amendment to the Internal Revenue Code is very uncertain. Therefore, Nevada lawmakers should *get on with the aforementioned* amending process and not wait for Congress to act.

### Potential Revenue Lost to the IRS

If Nevada had provided for a "pick-up" estate tax, the estimated allowable credit for 1980 would have been in the range of $17 million to $18 million, based on audited federal estate tax returns in which Nevada would have had an interest.[28] Other estimates suggest that on the average, Nevada's "pick-up" tax money would have been in the range of $5 million to $7 million per year from 1975 to 1983 inclusive. This estimate apparently does not include a possible "pick-up" of $5 million on the federal estate tax return of William Harrah. Also, 1984 would have been a good year for "pick-up" estate tax revenue; the Nevada Department of Taxation could have had an estimated $9 million of federal revenue from the estate of Howard Hughes.

Therefore, it is notable that "pick-up" estate tax revenue would be characterized by wide swings from year-to-year. For example, A.C. Zimmerman, representing the IRS, stated that Nevada could have "picked-up" a credit of approximately $7.0 million in 1977, but only $2.0 million in 1978.[29] Lieutenant Governor Cashell suggested that the problem of fluctuating "pick-up" revenue could be minimized if it were deposited in an endowment fund in support of the state's education system.[30] The fund could be drawn on from time to time as needs arise.

### Rejected by Voters

The 61st session of the Legislature (1981) approved Joint Resolution No. 6 of the 60th session to amend the Nevada Constitution to pave the way for levying a "pick-up" estate tax. The proposal was presented to the electorate for approval or rejection as Question No. 6 on the ballot of the General Election, November 2, 1982. The ballot measure read as follows: "Shall the Nevada Constitution be amended to authorize the imposition of an estate tax limited to the credit allowable against the federal estate tax?" The *explanation* and *argument for* passage were stated very clearly and concisely:

**(Explanation to Question No. 6)**

Under federal law, a credit is allowed against the federal estate tax for the amount of any death tax imposed by a state, up to a certain amount for each estate. This amendment will, if ratified, authorize the legislature to impose a tax for the benefit of this state equal to that maximum amount. The tax can be imposed only on an estate which is subject to the federal estate tax, and if that estate is also subject to a death tax imposed by any other state, the Nevada tax is reduced by that amount, so the total can never exceed the federal tax otherwise payable.

**ARGUMENT FOR PASSAGE**

The federal government already imposes an estate tax on property in Nevada. Every state in the United States, except Nevada, claims a share of this federal tax. Adoption of this amendment would allow the Nevada legislature to establish a state tax which would pick up a portion of the federal estate tax. This type of "pick-up" tax does not increase the tax payable by the estate. In a time of tight budgets, Nevada cannot afford to neglect the opportunity to claim a portion of an existing federal tax.

The argument against passage was weak, erroneous and misleading:

### ARGUMENT AGAINST PASSAGE

Some residents have moved into Nevada specifically because of its few taxes. If this amendment passed and the legislature acted upon it, the state could no longer be advertised as being "income and estate tax-free." Because of the nature of the estate tax, the expected revenue could vary considerably from year to year. Due to recent congressional actions, the number of estates subject to the tax will decrease over the next few years and revenue from the tax might decrease correspondingly.

The final argument that "the number of estates subject to tax will decrease over the next few years . . . " cannot stand the test of scrutiny. Even moderate inflation elevates estates into the taxable range and/or higher in that range. Also, apparently Nevada is still attracting wealthy residents.

The second sentence in the Argument Against Passage is false: "If this amendment passed and the legislature acted upon it, the state could no longer be advertised as being 'income and estate tax-free.'" Nevada would merely be picking-up federal estate tax credits, participating in revenue sharing with the federal government.

### The Outcome

Question No. 6 was rejected by an overwhelming margin: NO 134,398; YES 86,729.

There is evidence that voter misunderstanding of the issue led to the defeat of Question 6. Senator Don Mello stated "the executive secretary of the Nevada AFL-CIO . . . told [him] that the lack of understanding on the difference between the "pick-up" tax and a state inheritance tax led to AFL-CIO opposing Question 6 at the [November 1982] election."[31]

On the same subject, another observer stated " . . . I asked my neighbor if he remembered voting [on Question No. 6]. . . . He . . . said he voted against it . . . He said that voters did not want a new tax and that wealthy people would not move into Nevada if this tax passed. When I explained what the new law meant, he said that the wording of the bill is confusing and might be changed a bit so that the voters would understand what the law would mean."[32]

We cannot draw a valid conclusion from a sample of one, but the response quoted above is consistent with casual observations which suggest voter apathy and misconceptions as to the meaning of the proposed Nevada estate tax.

An alternative argument is that many voters, having elected conservatives to the Nevada Legislature, understood Question No. 6 and wanted to defeat it.

At the 62nd session of the Legislature (1983) the attempt to amend the Nevada Constitution to permit enactment of a "pick-up" estate tax resumed. The intent of SJR No. 11 introduced at the 62nd session is identical to that of previous "estate tax" resolutions, except for the provision that the revenue to be "picked-up" shall be "only for the purpose of education, to be divided between the common schools and the state university for their support and maintenance."

However, if the estate tax "pick-up" materializes, revenue from this source "earmarked" for education, might displace some General Fund money which otherwise might be allocated to education. Therefore, revenue from picking-up the federal credit should not be regarded as a "windfall" for education.

### The Road Ahead May Be Rough

The 62nd session of the Legislature (1983) approved JR No. 11. To continue this process of amending Article 10, Section 1, the 63rd session (1985) must confirm the action of the 62nd session of the Legislature by approving the same Joint Resolution. If the Legislature responds favorably to the Joint Resolution in 1985, the proposed "pick-up" estate tax will be put on the ballot again for referendum vote by the electorate.

"State Senator Don Mello, never one to back off from a fight, is getting ready to go eyeball-to-eyeball with voters over the estate tax. He deserves all the luck he can get, because this is one tough issue out there in voter land.

Mello's estate tax resolution would not cost Nevadans one penny in extra taxes. It would bring in millions [of dollars] for education. Yet Nevadans get frantic every time the proposal comes up . . ."[33]

There are indications that in the last referendum on the estate tax, 1982, many voters did not understand the issue (above footnotes 31 and 32). More adequate explanatory publicity is needed.

### Summary

Due to failure to provide for an innocuous "pick-up" the federal credit estate tax, Nevada is forfeiting an estimated annual average of $10 million of revenue to the IRS.

We have shown that the perennial arguments against levying the "pick-up" estate tax cannot stand the test of analytical scrutiny. There is no basis for asserting that levying a "pick-up" estate tax will lead to creation of a bureaucracy to police Nevadans. Administative costs associated with merely "picking-up" the federal estate tax credit have proved to be extremely minimal relative to revenue collected in "pick-up the credit states" of Alabama, Alaska, Arkansas, Florida and Georgia. Wealthy individuals are familiar with Nevada's *tax haven* characteristics: no individual or corporate income taxes. They also know that a "pick-up" estate tax does not add to their federal estate tax liability. Therefore, the "pick-up" estate tax would not tarnish Nevada's *no tax* image.

---

***Footnotes:***

[1] Quoted with approval by John Cockle, representing the Nevada Bankers Association, Trust Committee. Minutes of the Nevada State Legislature, Assembly Committee on Taxation, March 26, 1979, p. 9. Mr. Cockle stated that the [bankers'] "trust division has uniformally opposed [the pick-up estate tax]." He also stated that the trust division consists of the Trust [Departments] of the following banks: Nevada National, First National [now First Interstate], Valley, Security, Pioneer Citizens, Nevada State and Bank of Nevada." Minutes, Assembly Committee on Taxation, March 1, 1979, p. 5.

Sentiment against death and gift taxes apparently is strong among members of the Nevada Legislature. The disfavor was expressed in AJR No. 34, 61st session, April 9, 1981, memorializing Congress to repeal federal estate and gift taxes.

[2] Adolph Wagner, "Three Extracts on Public Finance," *Classics in the Theory of Public Finance,* R.A. Musgrave and Alan T. Peacock, editors, pp. 16-28.

[3] Joseph R. Seifers, "Nevada and the Death Tax," unpublished master's thesis, Dept. of Economics, University of Nevada, Reno, 1975, pp. 16-57, reviews the literature on theory of inheritance and estate taxes.

[4] Jerome Kurtz, "Hearings on the Tax Reform Act of 1969," before House Ways and Means Committee, 91st Congress, 1st Session, pt. 2, cited in E.A. Sanders and D. Westfall, *Readings in Federal Taxation,* p. 594.

[5] The 16th Amendment authorizes Congress to "lay and collect taxes on income . . . without apportionment among the several states. . . . "

[6] The IRS Code 2001.

[7] *Ibid.*

[8] Senator Don Ashworth, Minutes of the Nevada State Legislature, Assembly Committee on Taxation, March 26, 1979, p. 2.

[9] Mr. Brady, Minutes of the Nevada State Legislature, Assembly Committee on Taxation, May 5, 1981, p. 5.

[10] Testimony of Steven Jensen, IRS attorney dealing with the estate tax, *op. cit.* p. 5.

[11] Testimony of Ray Knisley, Minutes of Senate Committee on Taxation, Feb. 5, 1981, p. 7.

[12] "AB 608 imposes estate tax not greater than credit allowed under federal law." Minutes, Assembly Committee on Taxation, May 27, 1981, p. 2.

[13] Testimony of Senator Don Ashworth, Minutes, Assembly Committee on Taxation, March 26, 1979, p. 7.

[14] Exhibit H, by Senator Don Mello, Minutes, Senate Committee on Taxation, March 8, 1983.

[15] Exhibit A, Minutes, Assembly Committee on Taxation, March 26, 1979.

[16] Testimony of Ray Knisley, Minutes, Assembly Committee on Taxation, Feb. 16, 1981, p. 4.

[17] Minutes, Assembly Committee on Taxation, March 1, 1979, p. 6.

[18] Testimony of John Cockle, Minutes, Assembly Committee on Taxation, March 26, 1979, p. 11.

[19] *Ibid.* p. 12.

[20] *Ibid.*

[21] *Ibid.*

[22] *Reno Gazette-Journal,* Editorial, Aug. 12, 1984.

[23] Mr. Mann, Minutes, Assembly Committee on Taxation, March 26, 1979, p. 13.

[24] "The Sunny Money Game," *Forbes,* March 19, 1979, p. 85. Exhibit D, Minutes, Assembly Committee on Taxation, March 26, 1979, p. 15.

[25] *Ibid.*

[26] *Ibid.*

[27] Testimony of Mr. Joerg, Minutes, Assembly Committee on Taxation, May 9, 1983.

[28] Testimony of Steven Jensen, IRS Attorney dealing with the Estate Tax, Minutes, Assembly Committee on Taxation, May 5, 1981, p. 3.

[29] Testimony of A.C. Zimmerman, Head of the IRS Auditing Department dealing with the Estate Tax, Minutes, Assembly Committee on Taxation, March 26, 1979, p. 3.

[30] Minutes, Assembly Committee on Taxation, April 28, 1981, p. 7.

[31] Exhibit H by Senator Don Mello, (see f.n. #14).

[32] Exhibit J, Minutes, Senate Committee on Taxation, March 8, 1983.

[33] "No reason not to adopt estate tax in '85 Legislature," *Reno Gazette Journal,* Editorial, Aug. 12, 1984.

# Academic Excellence: An Achievable Goal For the University of Nevada, Reno?

*by Michelle I. Austin**

## INTRODUCTION

Providing quality higher education is central to Nevada's future. Increasing demands are being placed upon the state's University System for a well-educated labor force and expertise in research and development, management and marketing. If the state is going to succeed in its goal of economic diversification the ideal of academic excellence must be reinstated. A university with administrators, regents and legislators dedicated to fulfilling a mission of providing top quality education can be a rich source of new ideas, as well as a source of trained employees and leaders. The quality of education offered at the state's oldest institution, the University of Nevada, Reno, is being adversely affected by four, equally important factors: An increasing student/faculty ratio, declining real faculty salaries, decreasing public support of higher education and a poor academic reputation. The first sections of this paper analyze each of these four factors and relate them to the quality of education at the University of Nevada, Reno. The final section offers some possible solutions that would help to promote the goal of academic excellence.

## ENROLLMENT

During the ten year period dating from 1974-1983 the University of Nevada, Reno, has undergone significant changes in its enrollment patterns. These changes have resulted in a major shift: upper-division and graduate level enrollments now dominate the University. Data gathered on the number of lower-division, upper-division, and graduate students reveal that over the 1974-1983 period lower-division enrollment as a percent of total regular headcount enrollment has declined. Meanwhile, upper-sivision enrollment as a percent of the total regular headcount increased between 1974-1976, peaked in 1977, and has subsequently fluctuated near its 1974 level. Further, graduate enrollment as a percent of the total headcount increased over the entire period 1974-1980. Between 1980 and 1983 graduate level enrollment leveled off. At the present time graduate level enrollment represents 20.9% of the total university enrollment. By the end of 1983 upper-division and graduate enrollment was 61.6% of the total university enrollment. This compares with 52.1% for 1974. Actual enrollment figures and relative percentages for the three enrollment classifications discussed above are presented in Table 1.

## IMPACT ON INSTRUCTION

Students enrolled in upper-division and graduate courses need more individualized instruction and advising. Thus, a lower student/faculty ratio is required for doctoral granting institutions, such as the University of Nevada, Reno, relative to comprehensive and general baccalaureate institutions that primarily grant degrees at the masters and bachelors levels.

For the academic year 1967-1968 the student/faculty ratio[1] was 15:1 at the University of Nevada, Reno, and 19.4:1 at the University of Nevada, Las Vegas [7,p.64]. A joint recommendation from the Higher Education Advisory Committee and Chancellor's Office stated that enrollment at both the University of Nevada, Reno, and the University of Nevada, Las Vegas, would exceed 10,000 full time equivalent students by the year 1980. As a consequence, the University of Nevada System would benefit from economies of scale justifying a higher student/faculty ratio. The recommended ratio was 20:1. This recommendation was accepted by the Board of Regents and subsequently by the 1969 Legislature. Thus, a gradual movement toward a 20:1 student/faculty ratio was planned to take place over the following decade. However, in 1971 Governor O'Callaghan recommended that the 20:1 student/faculty ratio be implemented immediately. Again, this recommendation was adopted by the Legislature. But in 1981 the Nevada Legislature approved a further increase of this ratio to 22:1 and it remains unchanged today.

While this ratio may be adequate for medium-sized public institutions offering primarily undergraduate degrees, it is not satisfactory for medium-sized public universities granting professional, masters and doctoral degrees. When the

---

**Michelle I. Austin is a graduate student in the College of Business Administration, University of Nevada, Reno.*

*The author wishes to thank Dr. James J. Richardson, Professor of Sociology, UNR, for reading a draft of the manuscript, helpful suggestions and information provided and Peggy P. Taylor, Senior Economic Analyst, Harrah's Hotels and Casinos, for reading a draft of the manuscript. The author assumes responibility for possible errors.*

### TABLE 1
### Regular Headcount Student Enrollment
### Fall 1974 — Fall 1983
### University of Nevada, Reno

| SEMESTER | YEAR | LOWER DIVISION | % OF TOTAL HEADCOUNT | UPPER DIVISION | % OF TOTAL HEADCOUNT | GRADUATE | % OF TOTAL HEADCOUNT | TOTAL REGULAR HEADCOUNT STUDENTS* |
|---|---|---|---|---|---|---|---|---|
| FALL | 1974 | 3328 | 47.9 | 2315 | 33.4 | 1298 | 18.7 | 6941 |
| FALL | 1975 | 3564 | 47.7 | 2513 | 33.7 | 1389 | 18.6 | 7466 |
| FALL | 1976 | 3444 | 45.9 | 2605 | 34.7 | 1455 | 19.4 | 7504 |
| FALL | 1977 | 3375 | 44.6 | 2698 | 35.7 | 1490 | 19.7 | 7563 |
| FALL | 1978 | 3285 | 45.6 | 2427 | 33.7 | 1485 | 20.6 | 7197 |
| FALL | 1979 | 3516 | 45.0 | 2587 | 33.1 | 1703 | 21.8 | 7806 |
| FALL | 1980 | 3895 | 47.3 | 2656 | 32.3 | 1676 | 20.4 | 8227 |
| FALL | 1981 | 3964 | 46.8 | 2777 | 32.8 | 1730 | 20.4 | 8471 |
| FALL | 1982 | 4080 | 45.8 | 3108 | 34.9 | 1729 | 19.4 | 8917 |
| FALL | 1983 | 3194 | 38.4 | 3392 | 40.7 | 1741 | 20.9 | 8327 |

* Total Regular Headcount = Total Headcount — (Non-Degree + Auditors).

Source: James T. Richardson, "Changing Patterns of Enrollment at UNR, With a Discussion of Budgetary Implications," Nevada Public Affairs Review, Vol. 2, 1979, pp 28-30, and the Registrar's First Enrollment Reports.

level of degree and type of program are taken into consideration, the average student/faculty ratio for doctoral granting institutions is approximately 16.7:1 on a nationwide basis [7,p.65].

Considering the University's enrollment trends toward an upper-division, graduate institution, this ratio warrants further scrutiny if the University of Nevada, Reno, is going to provide the kind of education necessary to turn out high quality graduates who are capable of assuming positions of responsibility in business and society.

The second change in enrollment patterns at the University of Nevada, Reno, is the shift to a greater number of headcount students relative to full time equivalent students. Table 2 illustrates a comparison of total headcount students *vs* annual net full time equivalent students for the period fall 1974 to fall 1983.[2] In 1974 annual net full time equivalent students as a percentage of total headcount students was 89.4%. By 1983 this ratio had fallen to 72.5%. This means that there are many more people attending the University of Nevada, Reno, today than in 1974. The significance of this declining ratio is that in the area of instruction the formula used to determine the number of classified positions, wage positions and the amount of funds allocated to operating expenses is based on the number of faculty, which is determined by the full time equivalent student/faculty ratio. A high ratio translates into fewer faculty and therefore fewer classified positions and fewer wage positions. It also means that less money is allocated to operating expenses. Because of the enrollment trends that exist at the University of Nevada, Reno, any formula that does not take into account the number of headcount students, understates the actual funds that are needed to satisfy the increasing demands placed on the University due to increasing headcounts. Such demands include an increased need for counseling, testing and advising, as well as an intensified demand for public space, particularly parking.

### TABLE 2
### Comparison of Headcount and FTE Enrollments
### Fall 1974 — Fall 1983
### University of Nevada, Reno

| Semester | Year | Total Headcount Students* | Annual Net FTE Students** | FTE as a Percent of Total Headcount |
|---|---|---|---|---|
| FALL | 1974 | 7309 | 6532 | 89.4 |
| FALL | 1975 | 8070 | 6564 | 81.3 |
| FALL | 1976 | 8031 | 6387 | 79.5 |
| FALL | 1977 | 8109 | 6294 | 77.6 |
| FALL | 1978 | 7904 | 6017 | 76.1 |
| FALL | 1979 | 8462 | 6157 | 72.8 |
| FALL | 1980 | 8969 | 6432 | 71.7 |
| FALL | 1981 | 9056 | 6603 | 72.9 |
| FALL | 1982 | 9391 | 6741 | 71.8 |
| FALL | 1983 | 9265 | 6724 | 72.6 |

*Total Headcount = Part Time + Full Time Non-Degree + Auditors - Medical Students.

**Does not include medical students.

Source: James T. Richardson, "Changing Patterns of Enrollment at UNR, With a Discussion of Budgetary Implications," *Nevada Public Affairs Review*, Vol. 2, 1979, PP 28-30, and Personal Interview with Tom Van Cantfort, *Institutional Planning and Budget*, University of Nevada, Reno, April 19, 1984.

## FACULTY SALARY STATUS

Average compensation[3] levels for all ranks of faculty

### TABLE 3

### University of Nevada, Reno, Average Compensation Figures and Average Salary Figures By Rank
### Academic Year 1974-1975 Through 1983-1984
### (dollars in thousands)

| | YEAR | | | | | | | | | | COMPOUND GROWTH RATE (percent) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Compensation By Rank* | 1974-1975 | 1975-1976 | 1976-1977 | 1977-1978 | 1978-1979 | 1979-1980 | 1980-1981 | 1981-1982 | 1982-1983 | 1983-1984 | Ten-Year | Five-Year |
| Professor | 22.6 | 24.9 | 26.7 | 28.4 | 30.4 | 32.8 | 39.4 | 42.7 | 42.0 | 42.1 | 7.1 | 6.4 |
| Associate Professor | 17.3 | 19.5 | 21.0 | 22.4 | 23.9 | 26.0 | 28.0 | 31.1 | 33.5 | 32.9 | 7.4 | 6.1 |
| Assistant Professor | 14.2 | 16.0 | 17.2 | 18.6 | 19.6 | 21.3 | 22.9 | 24.7 | 26.9 | 26.3 | 7.1 | 5.4 |
| Instructor | 12.4 | 14.5 | — ** | 17.2 | — | — | 20.2 | 22.9 | 23.8 | 22.9 | 7.0 | — |
| All Ranks | 18.6 | 20.5 | 22.4 | 23.7 | 25.5 | 27.7 | 29.2 | 32.6 | 35.4 | 34.3 | 7.0 | 5.5 |
| Average Salary By Rank | | | | | | | | | | | | |
| Professor | 20.6 | 22.4 | 24.1 | 25.6 | 27.3 | 29.4 | 31.0 | 35.2 | 37.7 | 36.9 | 6.7 | 5.8 |
| Associate Professor | 15.7 | 17.4 | 18.8 | 20.0 | 21.4 | 23.1 | 24.6 | 27.5 | 29.4 | 28.9 | 7.0 | 5.8 |
| Assistant Professor | 12.8 | 14.2 | 15.4 | 16.5 | 17.4 | 18.8 | 20.0 | 21.8 | 23.4 | 23.1 | 6.8 | 5.3 |
| Instructor | 11.1 | 12.9 | — | 15.2 | — | — | 17.5 | 20.1 | 20.6 | 20.1 | 6.8 | — |
| All Ranks | 16.9 | 18.4 | 20.2 | 21.3 | 22.8 | 24.7 | 25.7 | 29.0 | 31.1 | 30.2 | 6.7 | 5.2 |
| Consumer Price Index For All Items*** | 147.7 | 161.2 | 170.5 | 181.5 | 195.4 | 217.4 | 246.8 | 272.4 | 289.1 | 297.4 | 8.1 | 8.1 |

| | 10-Year | 5-Year |
|---|---|---|
| Increase in average compensation for all ranks | 7.0% | 5.5% |
| Increase in the consumer price index | 8.1% | 8.1% |
| Decrease in real purchasing power | -.9% | -2.6% |

| | 10-Year | 5-Year |
|---|---|---|
| Increase in average salary for all ranks | 6.7% | 5.2% |
| Increase in the consumer price index | 8.1% | 8.1% |
| Decrease in real purchasing power | -1.4% | -2.9% |

NOTES:

*Includes salary and countable fringe benefits.

**When the number of faculty members in any given rank is five or fewer, the data are not published to preserve confidentiality of individual salary figures. (The data are replaced by a dash)

***STATISTICAL ABSTRACT OF THE UNITED STATES 1984, 104th Edition, P493, U.S. Department of Commerce, Bureau of the Census.

Source: The data in this table were compiled from ACADEME, the official publication of the American Association of University Professors, "Annual Report on the Economic Status of the Profession", years 1975 through 1984.

members at the University of Nevada, Reno, have increased at an annual compound growth rate of 7% for the ten year period ending 1983-1984. This growth rate indicates that, in current dollars, i.e., unadjusted for inflation, the University of Nevada, Reno, faculty members' salaries have increased. However, when the inflation factor (as measured by the Consumer Price Index for all items) is taken into consideration it becomes evident that the growth in faculty salaries falls short of the growth in the inflation rate for the ten year period, 1974-1975 to 1983-1984 (see Table 3). For the period studied, University of Nevada, Reno, faculty members experienced a .9% annual decline in real purchasing power in terms of total compensation. This loss in purchasing power was more dramatic during the last five years of the period, when the decline in real purchasing power was 2.6% per year.

Similar results are found when average salary for all ranks of faculty members is reviewed. The ten-year compound growth rate for the all-ranks category was 6.7%. The compound growth rate for the Consumer Price Index for the same period was 8.1%. Thus, a decrease in real purchasing power of 1.4% per year was experienced by faculty members in terms of salary alone. Over the most recent five years this decline in real salary levels escalated to nearly 3.0% per year.

Of particular interest is the decline in average salary for all academic ranks as measured in current dollars. From year 1982-1983 to year 1983-1984 the all-ranks salary figures at the University of Nevada, Reno, declined from $31,100 to $30,200. This deterioration in salaries results partially from more experienced, better paid members retiring or leaving the system for more promising opportunities elsewhere, and younger, less experienced faculty being hired in their place at lower salaries.

A recent study of total UNR faculty compensation compared University of Nevada, Reno, salaries to three specific groups: USA, Mountain and Pacific, and a Selected Group.[4] The study indicated that in salary alone the University was competitive with all three groups for the 1982-1983 year. However, when fringe benefits are included in the comparison, significant discrepancies appear. The University of Nevada, Reno, offers the least total compensation when compared to all three groups. Table 4 shows 1982-1983 and 1983-1984 salary and compensation levels for all groups in the study.

A major factor accounting for the difference between total compensation at the University of Nevada, Reno, and the other three groups is the fact that the University of Nevada System does not participate in the federal Social Security program. For the 1984-1985 year, this program calls for 7.05% contribution for the first $37,800.00 in salary by both the employee and employer. Furthermore,

TABLE 4

**Average Salaries and Compensation for the University of Nevada, Reno And Various Groups of Comparable Institutions by Rank and for All Ranks Combined 1982-1983 and 1983-1984**

| Academic Rank | SALARY 1982/1983 | | | | COMPENSATION 1982/1983 | | | |
|---|---|---|---|---|---|---|---|---|
| | UNR | Select Group | USA | Mountain & Pacific | UNR | Select Group | USA | Mountain & Pacific |
| Professor | $37750 | $39700 | $38180 | $38550 | $42690 | $48140 | $45260 | $46860 |
| Associate | 29410 | 28950 | 28310 | 28130 | 33500 | 35460 | 33830 | 34250 |
| Assistant | 23370 | 24040 | 23170 | 23130 | 26870 | 29700 | 27750 | 28380 |
| Instructor | 20620 | 19320 | 17550 | 19150 | 23830 | 24250 | 20900 | 23480 |
| Lecturer | 24780 | 21780 | 20420 | 22140 | 28410 | 27080 | 25300 | 28160 |
| All Ranks | 31120 | 31740 | 30620 | 30830 | 35390 | 39760 | 36060 | 37600 |
| | SALARY 1983/1984 | | | | COMPENSATION 1983/1984 | | | |
| Professor | $36890 | $42200 | $40510 | $40860 | $41800 | $51270 | $48250 | $49810 |
| Associate | 28910 | 30770 | 30040 | 29820 | 32760 | 37760 | 36060 | 36410 |
| Assistant | 23090 | 25550 | 24580 | 24520 | 26160 | 31630 | 29580 | 30170 |
| Instructor | 20150 | 20540 | 18260 | 20300 | 22830 | 25830 | 22280 | 24960 |
| Lecturer | 22000 | 23150 | 21670 | 23470 | 24930 | 28840 | 26920 | 29930 |
| All Ranks | 30160 | 32740 | 32490 | 32680 | 34290 | 41280 | 39910 | 39970 |

Source: National Society of Professors, University of Nevada, Reno Chapter, Memorandum to the Board of Regents, members and others, February 24, 1984, University of Nevada, Reno.

the Social Security program is offered to almost all other institutions *in addition to* a regular retirement program and other usual benefits. For example, the University of Arizona's retirement program calls for a total contribution of 14% (employer pays 7% of base salary and employee matches) to the Teachers Insurance and Annuity Association/College Retirement Equities Fund (TIAA/CREF), plus the standard Social Security coverage. At the University of Nevada, Reno, a faculty member either belongs to the State of Nevada Public Employees Retirement System (PERS) or the TIAA/CREF. At the present time, in either program the individual pays 8% and the institution contributes an equal amount. With the PERS program the individual is only eligible for benefits after ten years of service at retirement age. Thus, when compared to other institutions offering both Social Security and retirement benefits, other things equal, total compensation at the University of Nevada, Reno, falls far short and will continue to fall short when compared to other university systems unless some action is taken to correct this deficiency. The significance of this is that the University of Nevada, Reno, cannot remain competitive in the marketplace for highly qualified teachers and will experience further difficulty in retaining the competent faculty that it now employs.

Exacerbating the problem of a noncompetitive compensation plan for the University of Nevada System is the high cost of living in the Reno and Las Vegas areas. For instance, a cost of living index prepared by the American Chamber of Commerce Researchers Association for the 3rd quarter of 1983 calculated price levels for major American cities. Cost of living indicators such as expenditures for housing, food, utilities, transportation, health care, and miscellaneous goods and services were used. Of forty cities selected for this index, the Reno-Sparks area price level was 114.6 relative to the national average of 100 for all six indicators combined. On this basis the Reno-Sparks area ranked fourth out of the forty selected cities in terms of expensive living conditions. Examining the housing factor alone, a major consideration for most people (and the critical cost in the decision of a young professor to come to UNR), Reno-Sparks ranked sixth most expensive out of the forty major cities selected.

The ecenomic conditions in the Reno-Sparks area are, in large part, responsible for this rapid escalation of house prices. During 1983 the gaming industry made an impressive comeback from the 1981-1982 recession. Consequently, as interest rates and unemployment fell and real disposable personal income rose, the demand for housing also increased. A recent study conducted by Nationwide Relocation Service, Inc., a Sears, Roebuck & Company subsidiary, compared the increase or decrease in home prices across the nation for the last six months of 1983. Specifically, the researchers studied the price of a 2,000 square foot, three bedroom, two bath, two-car garage home in an above average neighborhood. The results of the study indicated that nationwide home prices rose an average of 2.7% between July 1983 and January 1984. The Consumer Price Index increased only 1.4% for the same six month period. Leading the increase in housing prices was Reno, Nevada, where prices rose a whopping 15% for the period. This means that home prices outpaced inflation by 13.6%. Combined with the noncompetitive compensation package offered by the University of Nevada System, the high cost of living in Nevada has made hiring of a professor reknown in academic circles more of a dream than a reality for the University of Nevada, Reno.

**WHERE HOME PRICES ROSE...AND FELL**
**Biggest changes in housing costs***

| | July 1983 | January 1984 | Percent |
|---|---|---|---|
| | (Dollars in thousands) | | Change |
| Reno, NV | $100 | $115 | +15.0% |
| Long Island, NY | 123 | 139 | +13.0% |
| Richardson, Texas | 95 | 105 | +11.0% |
| Fairfield Co., Conn. | 109 | 120 | +10.0% |
| Ft. Worth, Texas | 100 | 110 | +10.0% |
| Raleigh, NC | 78 | 85 | + 9.0% |
| Norfolk, VA | 71 | 78 | + 9.0% |
| Las Vegas, NV | 88.5 | 94.5 | + 7.0% |
| Houston, Texas | 105 | 95 | -10.0% |
| Portland, Oregon | 120 | 110 | - 8.0% |
| Memphis, Tenn. | 92 | 86 | - 7.0% |
| Anchorage, AK | 154 | 147 | - 4.5% |
| Columbus, Ohio | 93 | 89 | - 4.3% |
| Indianapolis, IN | 85 | 82 | - 4.0% |
| Akron, Ohio | 78 | 75 | - 3.8% |
| Peoria, Ill. | 92 | 88 | - 3.0% |

*Prices apply to an existing 2000 square foot home with three bedrooms, two baths and a two-car garage.

Source: Guenther, Robert, "Uneven Pattern of Housing Prices is Mainly Tied to Local Conditions," *The Wall Street Journal*, March 15, 1984.

## STATE SUPPORT FOR HIGHER EDUCATION

A number of different criteria have been used to judge a state's support for and importance placed on higher education. Perhaps the best known and most credible source for such data is the annual report by Kent Halstead, "How States Compare in Financial Support of Public Higher Education"[5]. Three measures, as reported in the Halstead study, will be discussed here: tax capacity, tax effort, and allocation to public higher education.

The first, tax capacity, is defined as the potential of a state, together with its local governments, to generate revenue for public purposes through various tax programs. The tax capacity of a state and its local government is measured by the amount of revenue they could raise, relative to other states, if all governmental units in the sample applied identical tax rates to their respective tax bases. When this procedure was applied to all fifty states, Nevada received a ranking of $1,670 per capita, compared to the national average of $1,113 per capita, i.e., Nevada has the

TABLE 5

| STATE 1982 | TAX CAPACITY $/CAPITA | INDEX | STATE 1982 | TAX EFFORT PERCENT | INDEX | STATE 1983-1984 | ALLOCATION TO PUBLIC HIGHER EDUCATION % OF TAX REVENUE | INDEX |
|---|---|---|---|---|---|---|---|---|
| Alaska | 4341 | 390 | New York | 174.3 | 174 | Mississippi | 17.6 | 172 |
| Wyoming | 2605 | 234 | D.C. | 146.0 | 146 | Texas | 16.6 | 162 |
| *Nevada* | 1670 | 150 | Alaska | 143.9 | 144 | North Dakota | 15.5 | 151 |
| Oklahoma | 1503 | 135 | Rhode Island | 134.9 | 135 | South Carolina | 15.0 | 147 |
| Texas | 1499 | 135 | Wisconsin | 127.1 | 127 | Arizona | 14.7 | 144 |
| Louisiana | 1369 | 123 | Massachusetts | 125.0 | 125 | Alabama | 14.5 | 142 |
| North Dakota | 1358 | 122 | Hawaii | 117.0 | 117 | North Carolina | 14.4 | 141 |
| California | 1291 | 116 | Michigan | 115.9 | 116 | Utah | 14.1 | 137 |
| New Mexico | 1280 | 115 | Maine | 113.5 | 113 | Kansas | 13.9 | 135 |
| Montana | 1269 | 114 | New Jersey | 113.3 | 113 | New Mexico | 13.8 | 135 |
| Colorado | 1258 | 113 | Minnesota | 110.5 | 111 | Nebraska | 13.5 | 132 |
| D.C. | 1236 | 111 | Vermont | 109.8 | 110 | Kentucky | 13.4 | 131 |
| Delaware | 1236 | 111 | Maryland | 107.2 | 107 | Hawaii | 13.3 | 130 |
| Connecticut | 1224 | 110 | Pennsylvania | 105.7 | 106 | Idaho | 12.8 | 125 |
| Kansas | 1224 | 110 | Illinois | 104.9 | 105 | Washington | 12.6 | 123 |
| Hawaii | 1169 | 105 | Connecticut | 103.8 | 104 | Delaware | 12.4 | 121 |
| New Jersey | 1169 | 105 | Iowa | 100.5 | 101 | Oregon | 12.2 | 120 |
| Florida | 1124 | 101 | Georgia | 98.9 | 99 | Arkansas | 11.9 | 116 |
| Iowa | 1113 | 100 | California | 98.9 | 99 | Virginia | 11.7 | 114 |
| Minnesota | 1102 | 99 | Arizona | 98.8 | 99 | Wisconsin | 11.4 | 112 |
| Illinois | 1102 | 99 | North Carolina | 97.7 | 98 | Tennessee | 11.3 | 111 |
| Washington | 1091 | 98 | Utah | 97.2 | 97 | Louisiana | 11.3 | 111 |
| Maryland | 1091 | 98 | Washington | 95.8 | 96 | California | 11.3 | 111 |
| Oregon | 1080 | 97 | Oregon | 95.7 | 96 | Georgia | 11.2 | 110 |
| Nebraska | 1080 | 97 | Ohio | 94.7 | 95 | Montana | 11.1 | 109 |
| Massachusetts | 1069 | 96 | South Dakota | 94.7 | 95 | Iowa | 10.8 | 106 |
| Michigan | 1069 | 96 | South Carolina | 94.5 | 94 | Indiana | 10.6 | 104 |
| New Hampshire | 1057 | 95 | Nebraska | 93.3 | 93 | Colorado | 10.4 | 102 |
| Virginia | 1046 | 94 | Montana | 93.3 | 93 | Oklahoma | 10.4 | 102 |
| Ohio | 1013 | 91 | Mississippi | 91.8 | 92 | West Virginia | 10.0 | 98 |
| Missouri | 1013 | 91 | Wyoming | 89.8 | 90 | Wyoming | 9.9 | 97 |
| West Virginia | 1002 | 90 | Virginia | 89.4 | 89 | Florida | 9.7 | 95 |
| Arizona | 991 | 89 | Kentucky | 89.0 | 89 | Maryland | 9.6 | 94 |
| Pennsylvania | 991 | 89 | Indiana | 87.9 | 88 | Minnesota | 9.4 | 91 |
| New York | 991 | 89 | West Virginia | 86.9 | 87 | Illinois | 9.0 | 88 |
| Indiana | 991 | 89 | Colorado | 86.8 | 87 | Missouri | 9.0 | 88 |
| Wisconsin | 968 | 87 | Alabama | 86.7 | 87 | Michigan | 8.9 | 87 |
| Idaho | 957 | 86 | Delaware | 86.7 | 87 | South Dakota | 8.7 | 85 |
| Utah | 957 | 86 | Idaho | 84.6 | 85 | *Nevada* | 8.6 | 84 |
| Arkansas | 924 | 83 | Kansas | 84.1 | 84 | Ohio | 8.6 | 84 |
| South Dakota | 924 | 83 | Tennessee | 83.4 | 83 | Rhode Island | 7.8 | 76 |
| Vermont | 924 | 83 | Florida | 82.2 | 82 | New York | 7.3 | 71 |
| Georgia | 902 | 81 | New Mexico | 81.9 | 82 | Pennsylvania | 7.3 | 71 |
| Kentucky | 902 | 81 | Missouri | 80.9 | 81 | New Jersey | 7.1 | 69 |
| Rhode Island | 890 | 80 | New Hampshire | 79.0 | 79 | Massachusetts | 6.8 | 66 |
| Maine | 879 | 79 | North Dakota | 77.6 | 78 | Connecticut | 6.7 | 65 |
| Tennessee | 879 | 79 | Arkansas | 76.8 | 77 | Vermont | 6.7 | 65 |
| North Carolina | 868 | 78 | Louisiana | 73.5 | 74 | Maine | 6.6 | 64 |
| South Carolina | 835 | 75 | Oklahoma | 72.8 | 73 | Alaska | 5.7 | 55 |
| Alabama | 824 | 74 | Texas | 63.6 | 64 | D.C. | 5.3 | 52 |
| Mississippi | 790 | 71 | *Nevada* | 59.9 | 60 | New Hampshire | 5.2 | 51 |
| United States | 1113 | 100 | United States | 100 | 100 | United States | 10.2 | 100 |

Source: Kent D. Halstead, "How States Compare in Financial Support of Public Higher Education 1983-84", Seventh Edition, March 1984, National Institute of Education.

potential to raise $1,670 per individual, whereas the average for all fifty states is only $1,113 per individual. Overall, Nevada has the third largest tax capacity in the United States (Table 5).

The second criterion, tax effort, measures the actual tax revenue collected as a percentage of total tax capacity. The tax revenue collected by all fifty states equals total tax capacity on a nationwide basis. Therefore the nationwide tax effort equals 100%. Measures for individual states reveal how they compare to the national average. Nevada's nationwide ranking on this criterion was 51st, with a score of 59.9%.[3] Hence, on these two criteria Nevada holds two extreme positions: On the one hand, it possesses the capacity to increase its tax revenues to one of the top three in the nation. Conversely, Nevada has chosen to deliberately underutilize its potential revenue sources.

The final criterion, allocation to public higher education, measures the portion of state and local tax revenue appropriated and/or levied to support public higher education. This ratio suggests the importance attributed to higher education relative to other public services in a state. In Nevada, 8.6% of the tax revenue is allocated to public higher education. The national average is 10.2%. As a result Nevada was 39th in the nation (year 1983-1984). Additionally, this portion has decreased for the past several years from 10.5% of tax revenue in 1979-1980 to 8.6% on a small base of tax revenue in 1983-1984. This decrease has taken place despite the changes in enrollment trends and the decline in real faculty salaries which warrant more, not less, funds being allocated to public higher education.

## UNR IMAGE

Kyung Il (Ed) Ghymn, Professor of Marketing and International Business at the University of Nevada, Reno, conducted a two-phase study in 1981 and 1982 [2;3]. The study was designed to determine the image of the University of Nevada, Reno, as perceived by groups both external and internal to the organization. The external group respondents consisted of 488 Nevada high school students, 45 high school counselors, and 266 University of Nevada, Reno, alumni. The internal group respondents consisted of 814 students attending the University of Nevada, Reno, at that time and 355 faculty members, staff and administrators.

The results of this study indicate that on non-academic items such as location, campus beauty, friendliness, and social life all five subgroups were in agreement and ranked these items very favorably. For academic items like prestige, program difficulty, academic reputation, and management the groups also showed a high degree of concord; however,these items received very low ratings.[4]

The general opinion appears to be that the University of Nevada, Reno, is a friendly university, desirably located, with an attractive campus and an exciting social life, on the positive side. On the negative side, it suffers from poor student advising policies, a poor academic reputation, lax programs and low prestige.

When the surveyed groups were asked to list specific changes needed to improve the quality of the University of Nevada, Reno, the most frequently listed changes for the faculty/staff group and the student group were: Increasing the quality and quantity of faculty, increasing emphasis on academics, decreasing emphasis on athletics, and better student advising. Raising admission standards was also a high priority for the faculty/staff group. The alumni group was in agreement on increasing faculty quality and raising admission standards; however, this group recommended that more emphasis be placed on practical, job-related programs, in lieu of liberal arts and on improving the job placement service.

## CONCLUSIONS AND RECOMMENDATIONS

The existing internal problems facing the University of Nevada, Reno, today are sufficient to exhaust the minds of the most capable management team. While the University of Nevada, Reno, is not alone in its dilemma, it does seem to have more than its share of problems, and at the same time, it also possessess the resources to overcome these weaknesses.

Regarding the change in student composition at the University of Nevada, Reno, the present student/faculty ratio of 22:1 is too high for a doctoral granting institution, needless to say above the average for doctoral granting institutions, which is approximately 16:1 nationwide. In order to accomplish a lower student/faculty ratio, new faculty members will have to be added to the system. Attempts should be made to secure well-qualified individuals to fill these positions. For example, faculty members from prestigious institutions and/or with proven teaching and research track records should be aggressively solicited. To attract desirable faculty, the issue of compensation must also be addressed. As shown in Table 4 UNR faculty members are well below the average in terms of total compensation when compared to the study groups. Faculty salaries should either be increased to accommodate for the difference in fringe benefits or the benefit plan should be brought more in line with comparative institutions. One way this could be accomplished would be to increase the portion that the system contributes to a faculty member's retirement plan without decreasing his/her salary. Presently this percentage, 8%, is very close to the percentage that many other public institutions contribute to social security for faculty members (i.e. 7.05%). An alternative would be to offer a combination of salary increase and an increase in fringe benefits for each faculty member. In addition to enhancing the University's chances for attracting new faculty members, these increases would do much to improve the morale among current members and also provide incentive for superior performance.

In conjunction with these efforts to decrease the student/faculty ratio, recruit faculty members with good credentials, and increase compensation, entrance standards for the incoming students should be made more challenging. Both the undergraduate and graduate entrance exam scores, as well as the grade point average requirements should be raised. This would help to eliminate students who are not properly prepared for a university curriculum. In addition, challenging entrance standards, strictly enforced would be an initial step toward changing the "open door" image that the University of Nevada' Reno, currently holds.

Accomplishment of the above objectives will require increases in one or both of the primary sources of funding to the University of Nevada System: State support and student tuition. Table 5 shows that Nevada has the dollar capacity to establish a very good educational system. New funds could be generated by tapping some of this unused tax base or by increasing the percentage of tax revenues currently allocated to higher education. Public opinion surveys suggest that Nevada residents would support higher taxes if they are justified or if they are appropriated for a specific purpose. For example, the percentage of respondents agreeing with the implementation of a new tax increased when the question specified that the use would be for "education and health services" [8]. The other method, increasing the proportion of revenue allocated to higher education relative to other public programs, may be more difficult to achieve since many programs are already operating on minimal budgets.

Student tuition has increased 50% from academic year 1980-1981 to academic year 1983-1984. In fall 1980, undergraduate tuition was $24.00 per credit plus $750.00 for out-of-state students. In fall 1984, these figures had risen to $36.00 and $1,000.00, respectively. Any further increases in student tuition will be increasingly hard to account for unless some visible improvements are made. Once actions are implemented to better the system, the existing student body and new entrants will be more receptive to further tuition increases.

The benefits that a first-rate university can bring to a state are numerous. For example, the university should be promoted as a part of the state's economic diversification program. The university in itself is a form of diversification, creating jobs, bringing new residents into the area, and therefore increasing the state's economic base. Further, companies looking to Nevada as a potential location would be enticed by a well-established university that they can rely on for employment prospects, as well as for continuing education for current employees, research and development, and expertise in many business fields. Thus, the relationship between Nevada's universities and industry would be broadened. Also the residents of Nevada would realize advantages in the form of a high quality education at less cost for their children, supplementary courses for those who desire to enhance their job skills and a readily accessible and exhaustive source of reading and research materials.

Accomplishing the above goals will take time, effort, and a strong sense of commitment to excellence in education. One branch of a complete university system cannot be miraculously transformed overnight. However, given the well-organized, dedicated support of residents, students, educators, and policymakers, much can be done to improve the situation at the University of Nevada, Reno, in particular.

---

***Footnotes:***

[1] Student/faculty ratio may be defined as the number of full time equivalent students to the number of full time equivalent faculty at a university. For example, a student/faculty ratio of 22:1 would mean that for every 22 full time equivalent students at a university the state allocates one faculty member for budgetary purposes.

[2] Full time equivalent student = 15 credit hours at the undergraduate level and 8 credit hours at the graduate level. Thus to arrive at a total number of full time equivalent students for a semester:

1. Sum all undergraduate credits;
2. Divide this number by 15;
3. Sum all graduate credits;
4. Divide this number by 8;
5. Add both quotients together.

Annual net full time equivalent students = this number represents the average of all credits for both semesters, minus withdrawals during the first week, first report.

Total headcount students = part time students plus full time students plus non-degree students plus auditors minus medical students.

[3] Average compensation includes salary plus fringe benefits.

[4] This study was conducted by James T. Richardson and K. Donald Jessup, Co-Chairs of the National Society of Professors Salary and Budget Committee, for presentation to the Board of Regents. The comparison groups chosen included the following:

USA Group = 105 doctoral granting institutions, Pacific and Mountain Group = 23 public universities, few of which grant doctoral degrees, and the Selected Group = 15 leading public universities: University of Wyoming, Washington, Utah, Texas, Oregon, New Mexico, Montana, Idaho, Hawaii, Colorado, California at Berkeley, California at Los Angeles, Arizona, Alaska, and Michigan. This group was chosen as a model which the University of Nevada, Reno, would most like to pattern itself after in academic excellence.

[5] The Halstead report includes all fifty states plus the District of Columbia.

[6] The word "management" in the UNR Image Study was defined as the overall management of the University by its administrators.

***References***

1. Eymonerie, Maryse, Letter to James T. Richardson, February 21, 1984.
2. Ghymn, Kyung Il (Ed), "UNR Image Survey", August 1981, Bureau of Business and Economic Research, College of Business Administration, University of Nevada, Reno.
3. Ghymn, Kyung Il (Ed), "UNR Image: The Internal Group Study", January 1982, Bureau of Business and Economic Research, College of Business Administration, University of Nevada, Reno.
4. Guenther, Robert, "Uneven Pattern of Housing Prices Is Mainly Tied to Local Conditions", *The Wall Street Journal*, March 15, 1984.
5. Halstead, Kent, "How States Compare in Financial Support of Public Higher Education 1983-1984", National Institute of Education, 7th Edition, March 1984.
6. Richardson, James T., "Changing Patterns of Enrollment at UNR, With a Discussion of Budgetary Implications", *Nevada Public Affairs Review*, Number 2, 1979.
7. Richardson, James T. and K. Donald Jessup, "The History of Formula-Based Budgeting for Nevada Universities", *Nevada Public Affairs Review*, Number 1, 1981.
8. Richardson, James T. et. al., "Tax Increases and Public Opinion in Nevada", *Nevada Public Affairs Review*, Number 1, 1983.
9. Richardson, James, Nevada Faculty Alliance State President, Memorandum to the governor, Regents, Administrators, Legislature Members and Others, July 23, 1984.
10. The National Society of Professors, University of Nevada, Reno Chapter, Memorandum to the Board of Regents, Members and Others, February 24, 1984.
11. University of Nevada, Reno Faculty Handbook, Revised 1982-1983, Ninth Edition.
12. Watkins, Beverly T., "Faculty Raises Top Inflation, Average 6.4 Pct.", *The Chronicle of Higher Education*, Volume XXVI, Number 17, June 22, 1983.

# Pricing As A Conservative Practice of Nevada Water Companies: A Survey

*By Donald E. Agthe and Kambiz Raffiee**

**Introduction**

Water, like other economic commodities, is relatively scarce and useful. In general, the desire to use water exceeds the quantity available and therefore a market price must be established to ration the available supply among competing users. The value of water, and hence its price, depends not only on quantity supplied, but also on its quality. Water, like some other commodities, may be recycled. But the perceived quality of recycled water declines and therefore it is acceptable only in lower value uses, e.g., industrial use or agricultural irrigation.

The characteristics of water demand suggest that a restructuring of consumption patterns, treatment systems, and rationing through a price system could increase the potential quantity of water available. Other economic considerations include the cost of seeking new water sources including importation from other aquifers.

## Political Economy of Water

### Demand for Water

The demand for water is a composite of the demands of residential, commercial, industrial, agricultural, governmental and recreational users. The quantity of water demanded responds inversely to changes in price; i.e., the higher the price, generally the smaller the quantity demanded. For example, industrial processes can be changed to economize on the use of water and/or water may be recycled in response to an increase in its price. Similarly, sometimes farmers can switch to types of agriculture that minimize the consumptive use of water, adopt water management techniques, use laser leveled fields, or drip irrigation to economize on use of water. Households can install low flow devices, change indoor water use habits, economize on water used for irrigating landscaping, substitute types of landscaping that require much less irrigation than lawns, and repair leaky faucets. It is notable, however, that demand for water put to indispensable uses such as drinking, cooking, and sanitation is least responsive to a change in price.

It is important to distinguish between long term and short term adjustments when studying water demand. In the short run, water use appears frequently to be only slightly responsive to price changes. However, in longer term situations water users often make adjustments in their water-consuming capital stock and appliances, e.g., irrigation systems, production processes, washing machines and dishwashers.

Individual categories of users of water have different demand characteristics. Residential (end-use) demand for water is affected by climatic conditions and by differing tastes and preferences, level of income, stock of water-using appliances, and size and type of landscaping to be irrigated. Demand for water for irrigating landscaping is seasonal, subject to a "needle peak" during the summer months. The water demand of industry and agriculture is derived from the demand for the final product and the role of water in conjunction with other inputs determines the demand for water.

A market demand curve, composed of its individual segments, is shown in Figure 1. This curve is labeled RICAA and is the summation of the individual demands for residential (RR), industrial and commercial (ICIC), and agricultural (AA) water use. These relationships exhibit the typical inverse relationship between quantity of water demanded and price. In general, a lower price tends to encourage water use while raising the price has the opposite effect. Figure 1 is hypothetical and therefore does not portray the Truckee-Carson basin where agriculture is the largest consumptive user of water.

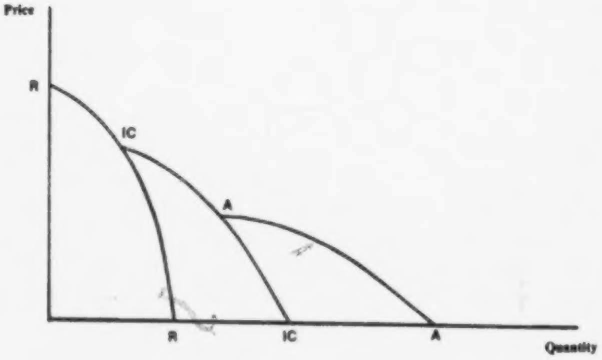


Figure 1 The Sectoral Demand for Water

---

*Donald E. Agthe is Associate Professor of Economics and Kambiz Raffiee is Assistant Professor of Economics, both of the College of Business Administration, University of Nevada, Reno.*

**Water Supply**

The supply of water, indicated by a positive relationship between price and quantity, is shown is Figure 2. The consumption range of local surface water, usually the cheapest source, is shown by line segment OA. Its price is $OP_L$. Line segment AB represents the consumption range of the second cheapest source, local ground water, with price $OP_G$. The increase in price over local surface water is caused by the expense of pumping, drilling, and equipment maintenance. If water mining is practiced (taking out more than is naturally recharged), then price will rise AA' from $OP_G$ reflecting the increased cost of pumping from greater depths. The consumption range of the most expensive supply source, imported water, is shown by the segment BZ. Its price is $OP_I$. Costs of importation usually include such capital expenditures as canals, tunnels, storage areas, and pumps in addition to operations and maintenance costs. Under the doctrine of prior appropriation, an additional cost of acquiring water rights in a distant aquifer must also be considered.

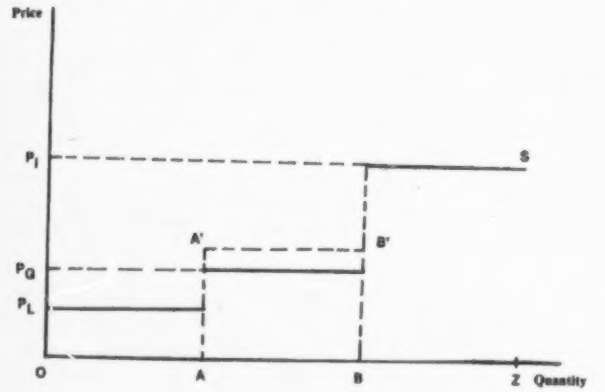


Figure 2 An Increasing-Block Rate Structure

Recycled water is also usually an expensive source of supply. However, it is not shown in Figure 2 because its cost of production is highly variable depending upon its original use. Furthermore, recycled water is frequently sold in specialized submarkets for very specific uses. Each submarket would, therefore, have its own demand and supply situation.

**The Water Market**

The market demand and supply curves are shown in Figure 3. These are identical to the curves depicted in Figures 1 and 2. The equilibrium market price and quantity are depicted by $P_0$ and $Q_0$, respectively. The situation portrayed is that agricultural demand for water, the lowest value use, has not required importation of water. Residences use quantity ZM, commerce uses quantity MN and agriculture utilizes quantity NR of water at price $P_0$. Thus each individual demand sector has some uses for water that do not materialize because of the price of water. This is the rationing or allocating function for water when derived from a market equilibrium solution. Lastly, note that if price rises, some uses of water in all sectors will be eliminated.

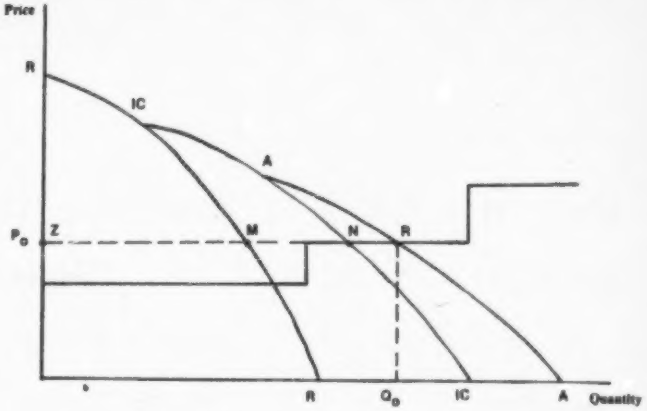


Figure 3 The Sectoral Market Equilibrium for Water

If the doctrine of prior appropriation is applied, subsequent urban or industrial growth may lead to purchase of agricultural water rights and/or enactment of legislation to limit or relocate the existing water uses. In areas where pumped ground water exceeds recharge, subsidence and increased pumping costs may occur for all users. In this case, it may be necessary to inject imported water into the aquifer and/or begin a costly control program that limits pumping to the recharge. The latter solution is likely to lead to costly litigation by those dissatisfied with the limiting program. The sources of dissatisfaction are usually economic losses suffered by the earlier users who have their water rights restricted or urban residents who feel that their economic use is of greater value than that of existing users.

Importing water occurs when all the local surface water and ground water supplies have been appropriated and overallocated. Frequently, this importation option is more costly than the local population can afford. It may involve an expanding urban area purchasing agricultural land and allocated water rights in distant aquifers. In some cases, distant rivers or ground water sources may not be allocated and are available for claiming. In either case, the community typically does not have a sufficient tax base or income base to pay for acquiring and importation of the distant water supply. Furthermore, no private firm would be willing to undertake the expense and carry the risk of acquiring and importing the water because of the lack of projected profit. This would be a case of market failure if the projected benefits from expanded agricultural, mining, or commercial activity exceed the costs of the importation project. In this case, the federal government is likely to allocate funds to the importation project on the basis of the economic benefits to the national economy, such as reduction of unemployment or greater economic growth. The cost is therefore transferred fully or partially to the nations' taxpayers.

The acquisition of water from a distant source such as the Colorado River frequently raises other questions. If the quantity of water fluctuates, there will be drought years in which all potential users cannot be served. Under the doctrine of prior appropriation, it is clear that earlier claims supersede later claims. In times of rapid growth a city may not have a sufficient earlier claim to support all of the water desired by its residents and industry. Costly arbitration or purchasing of earlier rights may be needed in this case. Perhaps, a governmental agency may be needed to resolve these conflicts and set priorities in the interests of health, welfare, and economic development. Conflicts also exist when the withdrawal of water also lowers its quality. Clearly, not all will be satisfied with the conflictive solution. Costly litigation and government debate may be considerable on this issue no matter what solution is proposed. The regions giving up the water will argue, rightfully, that this may stifle their own chances for future economic development.

Closely allied to the importing problem is that of treating water so that it may be recycled. Treated urban waste water may be recycled for agricultural, mining, and industrial uses. Here again, if the benefits exceed the cost, the treatment should be carried out. In this case, frequently, the cost of this treatment may be beyond the means of local governments to pay and federal or state subsidies may be required. These subsidies are usually justified on the basis of health, welfare, or economic development.

### Water Pricing and Conservation

Since water is scarce relative to the desires for its use, conservation in both the context of wise use and limiting of use must be considered. Two noneconomic means of limiting use would be through direct allocation on an arbitrary basis and through media promotion to encourage voluntary limitations of use. The best means of limitation and allocation appear to be through economic restriction. We have already seen that water is subject to the market forces of supply and demand. A market price should restrict use to those in which value exceeds or equals the price of water. Thus, raising the price of water will restrict the number of uses and individual amounts per use. As shown earlier, conservation practices such as more careful plumbing maintenance, replacement of lawns, changes in manufacturing and farming methods, or installation of low-flow devices will also occur. Raising the price may also encourage the development of new and more costly sources of supply such as water importation or treatment for recycling. The higher price would render such sources economically feasible.

Several water pricing schemes have been used historically. The oldest is a flat monthly charge for unlimited water use. This scheme does not result in conservation of water as the consumers under this rate scheme have no economic incentive to reduce water use. The flat monthly charge was developed in earlier periods when water was not considered a scarce resource and water district administrators were more concerned with paying for the costs of constructing and operating the service system. In more recent years, a rate combination of a flat monthly charge and a per unit price has evolved. This scheme necessitates metering costs and results in conservation of water as price per unit rises. The advantage of this system is that conservation can be achieved by purposely utilizing a scarcity price. Such a charge can reduce the need for expansion of the system or the need for water importation. An argument against this system is that it penalizes existing users in a growing urban area to accommodate the desires and needs of new residents. Any commonly shared meter in an apartment complex, mobile home park, or similar setting will not result in conservation on the part of those sharing the common meter.

A modification of the flat rate plus per unit charge has also evolved. This is one of upward steps or blocks so that bigger users encounter higher prices for their marginal use than smaller users. The rationale for this scheme is that low volume users are generally low income customers whose water use is confined largely to satisfy necessities. This lower rate is sometimes called a "lifeline rate." On the other hand, the larger users are regarded to have more easily reduced "luxury" uses such as large lawns and swimming pools. While this up-sloping block scheme is more complicated to estimate revenues for, it is frequently regarded as providing more equitable pricing for the consumers.

### Nevada's Price Structures and Urban Water Prices

Table 1 shows the rate structure types, broken down by

Table 1

**Water Rate Structures in Nevada by Number of Systems and Number of Customers for Commercial and Residential Service**

| | Residential | | | | Commercial | | | |
|---|---|---|---|---|---|---|---|---|
| Rate Structure | Customers | % | Systems | % | Customers | % | Systems | % |
| Increasing Block | 65,532 | 30 | 21 | 38 | 3,107 | 15 | 21 | 47 |
| Per Water Unit | 102,694 | 47 | 14 | 25 | 16,199 | 81 | 15 | 33 |
| Flat Fee | 48,154 | 23 | 21 | 38 | 793 | 4 | 9 | 20 |

Source: Data constructed from "Public and Private Water Systems in Nevada," State of Nevada Public Service Commission, (Prepared by Resource Concepts, Inc.) April, 1981.

## TABLE 2

**Residential Data by Number of Customers, Rate Structures, and Typical Water Bills for 17 Nevada Water Companies Whose Size Exceeds 1,000 Residential Customers***

| Water District | No. of Customers | Type of Rate | Rate | Fixed Monthly Charge | Typical Bill for Water | |
|---|---|---|---|---|---|---|
| | | | | | 10,000g | 20,000g |
| Carson City Water | 7,441 | upsloping block | .25/1,000 (1st 5,000)<br>.37/1,000 (next 10,000) | $ 5.00 | $ 8.10 | $11.60 |
| City of Fallon | 2,042 | per unit | .3075/1,000 | 2.50 | 5.58 | 8.65 |
| Boulder City | 3,154 | per unit | 1.00/1,000 | 7.50 | 17.50 | 27.50 |
| City of North Las Vegas Municipal Water System | 15,310 | upsloping block | .58/1,000 (1st 50,000)<br>.70/1,000 (over 50,000) | 6.00 | 11.80 | 19.60 |
| Valley Water Company | 1,095 | flat fee | ------ | 16.13 | 16.13 | 16.13 |
| City of Henderson | 8,300 | per unit | .67/1,000 | 6.60 | 13.30 | 20.00 |
| Las Vegas Valley Water District | 83,000 | per unit | .66/1,000 | 7.45 | 14.05 | 20.65 |
| Moapa Valley Water District | 1,134 | upsloping block | 15.15/8,000<br>.60/1,000 | None | 16.35 | 22.35 |
| Kingsbury G.I.D. | 1,800 | flat fee | ------ | 13.50 | 13.50 | 13.50 |
| City of Elko | 3,854 | flat fee | ------ | 11.50 | 11.50 | 11.50 |
| Battle Mountain Water and Sewer | 1,010 | upsloping block | 7.20/5,000<br>.50/1,000 | None | 9.70 | 14.70 |
| Fernley Utilities | 1,075 | upsloping block | 8.00/10,000<br>.50/1,000 | None | 8.00 | 13.00 |
| Hawthorne Utilities (Hawthorne) | 1,360 | upsloping block | 7.55/8,000<br>.60/1,000 | None | 8.75 | 14.75 |
| Tonopah Public Utilities | 1,172 | per unit | 3.00/1,000 | 1.00 | 31.00 | 61.00 |
| Incline Village G.I.D. | 5,847 | upsloping block | 7.30/5,000<br>.65/1,000 | None | 10.55 | 17.05 |
| Sun Valley Water and Sanitation District | 3,169 | per unit | .83/1,000 | 8.14 | 16.44 | 24.74 |
| Sierra Pacific Power Co. | 39,395 | flat fee | ------ | 21.01 | 21.01 | 21.01 |

*Source: Data gathered from public and private water systems in Nevada, prepared by Resource Concepts, Inc. (State of Nevada: Public Service Commission), April, 1984.

customer type, found for the 56 commercial and public water systems which offered data in a recent survey. It should be noted that several systems had no commercial customers and, therefore, no rate structure for commercial customers. The table shows that about two-thirds of the residential rate structures were of the water conserving increasing block and flat rate per water unit types. This figure accounts for about 77 percent of the residential customers. The remaining systems do not use pricing as a conservation measure. One system, Sierra Pacific Power Company of Washoe County, accounts for approximately 40,000 or 83 percent of the customers not subject to price structure conservation measures. This system is prohibited by state law from installing residential water meters. With the exception of the City of Elko with 3,900 customers, the remaining water systems using nonconservation rates are relatively small.

For the case of commercial customer rate structures, 80 percent of the systems offered conservation oriented rate structures which were faced by 96 percent of the customers. Thus, the water companies not using conservation rates generally served small numbers of customers.

Table 2 shows the rate structures, number of customers, and typical residential rates for 17 water companies in Nevada having at least 1,000 customers [6]. No downsloping block rate structures were found among these systems. Four systems had only a fixed charge while the remaining firms utilized water conserving per unit charges or upsloping

## TABLE 3

### Commercial Data by Number of Customers, Rate Structures, and Typical Water Bills for Nine Nevada Water Companies Whose Size Exceeds 200 Commercial Customers*

| Water District | No. of Customers | Type of Rate | Rate | Fixed Monthly Charge | Typical Bill for Water | |
|---|---|---|---|---|---|---|
| | | | | | 10,000g | 20,000g |
| Carson City Department of Public Works | 963 | upsloping block | .80/1,000 (1st 50,000)<br>1.00/1,000 (next 50,000) | $20.80 | $28.80 | $36.80 |
| City of Fallon | 541 | per unit | .3075/1,000 | 12.50 | 15.58 | 18.66 |
| City of North Las Vegas Municipal Water System | 657 | upsloping block | .58/1,000 (1st 100,000)<br>.70/1,000 (over 100,000) | 25.00 | 30.80 | 36.60 |
| City of Henderson | 500 | per unit | .67/1,000 | 26.00 | 32.70 | 39.40 |
| Las Vegas Valley Water District | 9,000 | per unit | .66/1,000 | 29.50 | 36.10 | 42.70 |
| Gardnerville Town Water Co., Inc. | 398 | flat fee | - - - - - | 6.50 | 6.50 | 6.50 |
| Hawthorne Utilities (Hawthorne) | 250 | upsloping block | 13.00/6,000<br>.60/1,000 | none | 15.40 | 21.40 |
| City of Elko | 461 | per unit | .57/1,000 | None | 5.70 | 11.40 |
| Sierra Pacific Power Co. | 5,505 | per unit | .9076/1,000 | 1.59 | 10.68 | 19.77 |

*Source: Public and Private Water Systems in Nevada, prepared by Resource Concepts, Inc. (State of Nevada: Public Service Commission), April, 1984.

block rates. The highest per unit charge was $3.00 per 1,000 gallons in Tonopah. None of the upsloping block rate structures exceeded two steps. In contrast, Tucson, Arizona has four steps [1]. In five cases, the first block had a zero per unit charge for a fixed amount of water ranging from 5,000 to 10,000 gallons per month. If the estimated per household water use in Carson City for April, 1984 of approximately 8,000 gallons [7] is typical for Nevada, there appears to be little economic incentive for residences in these four districts to practice conservation of indoor water use. Thus, there appears to be need for greater sophistication in block rate structures in Nevada as the population of the state grows relative to its water supplies.

Table 3 shows the commercial rate structures for nine Nevada water companies with over 200 commercial customers. In this case, only Gardnerville Town Water Company utilizes a flat fee. Here again, four companies using block rate structures do not appear to be particularly concerned about water conservation among smaller customers, as they have a large block with a zero price, and none of the companies utilizing block rates have more than two blocks.

### BIBLIOGRAPHY

1. Billings, R. Bruce and Day, Mark, "Price, Socioeconomic, and Climatic Influences on Residential Water Use in Southern Arizona," OWRT Project, Number A-104-ARIZ (Tucson, University of Arizona), November, 1982.
2. Dahl, Albin J., "An Economic Evaluation of Water Policy Alternatives in Washoe County," Bureau of Business and Economic Research, University of Nevada-Reno, August 3, 1978.
3. Howe, C.W., Lineweaver, F.P., "The Impact of Price on Residential Water Demand and Its Relation to System Design and Price Structure," *Water Resources Research,* 3(1): 13-32, 1967.
4. Kelso, Maurice M., Martin, William E., and Mack, Lawrence E., Water Supplies and Economic Growth in an Arid Environment (Tucson, University of Arizona Press), 1973.
5. Krutilla, John V. and Eckstein, O., Multiple Purpose River Basin Development (Baltimore, Johns Hopkins Press), 1969.
6. Nevada State of, "Public and Private Water Systems in Nevada," Proposal by Resource Concepts, State of Nevada (Public Service Commission), April, 1984.
7. Thornton, Ted, telephone interview, City of Carson City, Nevada, May, 1984.
8. Wenders, Jack, "Urban Water Pricing," *Arizona Review,* October, 1976, pp. 13-21.
9. Wilson, Richard E., "Economic Analysis of Water and Its Relationship to the Growth and Development of Washoe County," Bureau of Business & Economic Research, University of Nevada-Reno, 1978.

# Nevada Economic Indicators
## Statewide Statistical Data

| | April 1984 | May 1984 | June 1984 | 2nd Quarter 1984 | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | | | | | 1st Quarter-1984 2nd Quarter-1984 | 2nd Quarter-1983 2nd Quarter-1984 |
| Total Labor Force (000's) | 501.0† | 497.0† | 498.4 | 498.8 | + 2.2 | + 2.2 |
| Total Employment (000's) | 447.7† | 454.1† | 460.2 | 454.0 | + 1.7 | + 4.2 |
| Unemployment (000's) | 36.0† | 32.9† | 34.8 | 34.6 | − 17.0 | − 30.2 |
| Unemployment Rate | 7.2† | 6.6† | 7.0 | 6.9 | − 18.8 | − 31.8 |
| Unemployment Rate (Seasonally Adjusted) | 7.3† | 6.9† | 7.0 | 7.1 | − 9.8 | − 31.8 |
| Agricultural Empl. (000's) | 5.1† | 5.4† | 6.2 | 5.6 | + 49.1 | + 0.0 |
| Establishment Based Industrial Employment | | | | | | |
| Total All Industries (000's) | 412.2† | 416.8† | 421.8 | 416.9 | + .7 | + 3.6 |
| Mining | 6.3† | 6.4† | 6.5 | 6.4 | + 2.1 | + 11.0 |
| Contract Construction | 20.7† | 21.1† | 21.3 | 21.0 | + 4.5 | + 9.5 |
| Manufacturing | 20.1† | 20.2† | 20.3 | 20.2 | + 1.8 | + 6.1 |
| Transportation & Utilities | | | | | | |
| Transportation | 13.2† | 13.4† | 13.4 | 13.3 | + 0.0 | + 3.9 |
| Railroads | 1.4† | 1.4† | 1.4 | 1.4 | + 0.0 | − 6.2 |
| Air | 3.0† | 3.0† | 3.0 | 3.0 | − 1.1 | + 3.4 |
| Public Utilities | 11.4† | 11.3† | 11.4 | 11.4 | + 0.0 | − 2.3 |
| Total Trade | 82.1† | 82.8† | 83.2 | 82.7 | + .6 | + 3.9 |
| Wholesale Trade | 13.9† | 14.1† | 14.2 | 14.1 | + 1.4 | + 3.4 |
| Retail Trade | 68.2† | 68.7† | 69.0 | 68.6 | + .4 | + 4.0 |
| Finance, Ins., Real Estate | 19.3† | 19.2† | 19.2 | 19.2 | − .3 | + 4.5 |
| Service Industries | 179.4† | 182.1† | 187.1 | 182.9 | + .2 | + 3.2 |
| Hotels, Amusement and Recreation Combined | 115.1† | 117.6† | 122.2 | 118.3 | + .1 | + 2.7 |
| Medical and Health | 15.4† | 15.4† | 15.4 | 15.4 | − .4 | − 2.5 |
| Total Government | 59.7† | 60.3† | 59.4 | 59.8 | + 1.2 | + 1.9 |
| Federal | 9.8† | 10.1† | 10.4 | 10.1 | + 4.8 | + 2.7 |
| State and Local | 49.9† | 50.2† | 49.0 | 49.7 | + .5 | + 1.8 |
| Education | 22.4† | 22.7† | 20.8 | 22.0 | + .8 | + 7.7 |
| Average Weekly Earnings in Selected Industries | | | | | | |
| Mining | 542.72† | 543.58† | 553.32 | 546.54 | + .1 | + 4.0 |
| Construction | 623.42† | 652.13† | 608.66 | 626.07 | + 3.5 | + 2.4 |
| Manufacturing | 360.50† | 359.45† | 367.32 | 362.42 | + 1.7 | + 5.1 |
| Public Utilities | 477.46† | 523.72† | 487.48 | 496.22 | + 3.6 | + 6.5 |
| Trade | 273.50† | 279.11† | 280.49 | 277.70 | + 2.7 | + 6.2 |
| Average Weekly Hours in Selected Industries | | | | | | |
| Mining | 42.6† | 42.6† | 42.4 | 42.5 | − 1.2 | − 1.2 |
| Construction | 36.5† | 37.5† | 36.6 | 36.9 | + 2.9 | + 2.9 |
| Manufacturing | 40.1† | 39.5† | 40.1 | 39.9 | + .7 | + 4.5 |
| Public Utilities | 39.2† | 42.1† | 39.6 | 40.3 | + 1.3 | + 1.1 |
| Trade | 33.6† | 34.5† | 34.8 | 34.3 | + 1.5 | + .6 |
| Average Hourly Earnings in Selected Industries | | | | | | |
| Mining | 12.74† | 12.76† | 13.05 | 12.85 | + 1.3 | + 5.3 |
| Construction | 17.08† | 17.39† | 16.63 | 17.03 | + .6 | − .4 |
| Manufacturing | 8.99† | 9.10† | 9.16 | 9.08 | + 1.0 | + .7 |
| Public Utilities | 12.18† | 12.44† | 12.31 | 12.31 | + 2.3 | + 5.4 |
| Trade | 8.14† | 8.09† | 8.06 | 8.10 | + 1.3 | + 4.2 |

## Statewide Statistical Data (Continued)

| | | | | | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | April 1984 | May 1984 | June 1984 | 2nd Quarter 1984 | 1st Quarter-1984 2nd Quarter-1984 | 2nd Quarter-1983 2nd Quarter-1984 |
| Construction Activity | | | | | | |
| Residential ($000's) | 108,000 | 75,400 | 64,700 | 248,100 | + 17.6 | − 12.9 |
| Nonresidential ($000's) | 44,600 | 24,500 | 30,100 | 99,200 | + 112.0 | − 24.3 |
| Nonbuilding ($000's) | 13,700 | 34,600 | 8,900 | 57,200 | + 45.5 | + 85.7 |
| Total ($000's) | 166,300 | 134,500 | 103,700 | 404,500 | + 36.2 | − 9.4 |
| # of New Dwelling Units | 1,874 | 1,396 | 1,379 | 4,649 | + 13.0 | − 14.8 |
| Tax Collections ($) | | | | | | |
| Liquor | 1,054,698 | 1,210,092 | 1,241,239 | 3,506,029 | + 18.3 | + 4.0 |
| Cigarette | 1,664,914 | 1,470,758 | 1,745,723 | 4,882,396 | + 11.6 | + 35.4 |
| Fuel | 3,588,836 | 3,610,309 | 3,812,773 | 11,011,918 | + 10.6 | + 2.3 |
| Quarterly Taxable Sales ($000's) | – | – | – | 1,929,900 | + 21.6 | + 12.1 |
| Quarterly Gaming Revenues ($000's) | – | – | – | 746,821 | − 1.4 | + 3.0 |
| Highway Traffic Flow | | | | | | |
| 17 Selected Stations (Avg. Daily) | 106,340 | 114,555 | 132,346 | 117,747 | + 25.2 | + 4.1 |

† Revised.

# Las Vegas Standard Metropolitan Statistical Area

| | April 1984 | May 1984 | June 1984 | 2nd Quarter 1984 | PERCENT CHANGE 1st Quarter-1984 2nd Quarter-1984 | PERCENT CHANGE 2nd Quarter-1983 2nd Quarter-1984 |
|---|---|---|---|---|---|---|
| Total Labor Force (000's) | 286.2† | 281.1† | 279.7 | 282.3 | + 2.5 | + 3.5 |
| Total Employment (000's) | 247.6† | 251.0† | 253.9 | 250.8 | − .0 | + 3.9 |
| Unemployment (000's) | 21.5† | 20.1† | 22.4 | 21.3 | − 12.7 | − 25.3 |
| Unemployment Rate | 7.5† | 7.1† | 8.0 | 7.5 | − 15.0 | − 28.0 |
| Unemployment Rate (Seasonally Adjusted) | 7.6† | 7.4† | 7.9 | 7.6 | − 10.2 | − 27.5 |
| Agricultural Employment (000's) | .9† | .9† | 1.1 | 1.0 | + 52.6 | + 0.0 |
| Establishment Based Industrial Employment | | | | | | |
| Total All Industries (000's) | 230.1† | 232.8† | 235.5 | 232.8 | − .9 | + 2.4 |
| Mining | .3† | .3† | .3 | .3 | + 0.0 | + 0.0 |
| Contract Construction | 13.2† | 13.2† | 13.1 | 13.2 | + 3.9 | + 10.6 |
| Manufacturing | 7.8† | 7.8† | 7.8 | 7.8 | + 2.6 | + 9.9 |
| Transportation & Utilities | | | | | | |
| Transportation | 7.9† | 8.1† | 8.1 | 8.0 | − .4 | + 2.6 |
| Railroads | .5† | .5† | .5 | .5 | + 0.0 | − 6.3 |
| Air | 2.5† | 2.5† | 2.6 | 2.5 | − 1.3 | + 5.6 |
| Public Utilities | 5.9† | 5.9† | 5.9 | 5.9 | + 0.0 | − 2.2 |
| Total Trade | 46.7† | 47.1† | 47.1 | 47.0 | − .5 | + 2.4 |
| Wholesale Trade | 6.9† | 7.0† | 7.0 | 7.0 | + 0.5 | + 5.6 |
| Retail Trade | 39.8† | 40.1† | 40.1 | 40.0 | − .7 | + 1.9 |
| Finance, Ins., Real Estate | 11.1† | 11.1† | 11.1 | 11.1 | + 0.0 | + 5.7 |
| Service Industries | 108.6† | 110.5† | 113.7 | 110.9 | − 2.7 | + .8 |
| Hotels, Gaming & Recreation | 68.0† | 69.8† | 72.9 | 70.2 | − 4.3 | − 1.9 |
| Total Government | 28.6† | 28.8† | 28.4 | 28.6 | + 1.9 | + 3.5 |
| Federal | 5.1† | 5.1† | 5.3 | 5.2 | + 4.0 | + 4.7 |
| State and Local | 23.5† | 23.7† | 23.1 | 23.4 | + 1.4 | + 3.2 |
| Education | 11.3† | 11.4† | 10.6 | 11.1 | + 1.8 | + 11.0 |
| Construction Activity | | | | | | |
| Las Vegas | | | | | | |
| Residential ($000's) | 7,961 | 7,254 | 4,914 | 20,129 | − 38.0 | − 43.3 |
| Nonresidential ($000's) | 3,177 | 18,490 | 3,047 | 30,714 | + 55.8 | + 75.8 |
| Total Value ($000's) | 17,138 | 25,744 | 7,961 | 50,843 | − 1.9 | − 4.1 |
| # of New Family Units | 180 | 174 | 144 | 498 | − 40.6 | − 52.2 |
| North Las Vegas | | | | | | |
| Residential ($000's) | 439 | 129 | 75 | 643 | − 90.6 | − 89.0 |
| Nonresidential ($000's) | 756 | 971 | 498 | 2,225 | − 14.5 | − .2 |
| Total Value ($000's) | 1,196 | 1,100 | 573 | 2,869 | − 69.6 | − 64.4 |
| # of Permits | 44 | 59 | 52 | 155 | − 16.7 | − 40.6 |
| Energy Consumption | | | | | | |
| Sales (000's KWH) | 372,181 | 542,324 | 592,062 | 1,506,567 | + 12.1 | + 14.8 |
| # of Customers | 218,077 | 219,472 | 220,775 | 219,441 | + 1.5 | + 5.6 |
| Taxable Sales ($000's) | – | – | – | 1,054,285 | + 11.2 | + 10.4 |
| Gaming Revenues ($000's) | – | – | – | 470,133 | − 9.6 | − 2.9 |
| Air Transportation-McCarran | | | | | | |
| Passengers (Arr. & Depart.) | 821,725 | 809,050 | 793,598 | 2,424,373 | − 5.6 | − 9.9 |
| Cargo Enplaned (lbs.) | 781,732 | 913,497 | 825,335 | 2,520,564 | − 7.5 | − 21.5 |
| Cargo Deplaned (lbs.) | 1,638,211 | 1,669,739 | 1,624,719 | 4,932,669 | − 6.8 | − 6.9 |
| Highway Traffic Flow | | | | | | |
| 4 Selected Stations (Avg. Daily) | 30,360 | 32,142 | 35,467 | 32,656 | + 14.6 | + 3.1 |
| Room Tax ($) | | | | | | |
| Clark County | 1,427,583 | 1,759,885 | 1,350,542 | 4,538,010 | − 10.5 | − 2.8 |
| Las Vegas City | 236,825 | 270,955 | 226,883 | 734,663 | − 11.1 | − 9.3 |
| SMSA Total | 1,671,381 | 2,039,392 | 1,584,942 | 5,295,715 | − 10.5 | − 3.7 |

†Revised.

# Reno Standard Metropolitan Statistical Area

| | April 1984 | May 1984 | June 1984 | 2nd Quarter 1984 | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | | | | | 1st Quarter-1984 2nd Quarter-1984 | 2nd Quarter-1983 2nd Quarter-1984 |
| Total Labor Force (000's) | 132.7† | 133.4† | 134.2 | 133.4 | + .8 | + .8 |
| Total Employment (000's) | 125.0† | 126.5† | 127.6 | 126.4 | + 2.7 | + 4.7 |
| Unemployment (000's) | 7.7† | 6.9† | 6.6 | 7.1 | − 24.0 | − 39.4 |
| Unemployment Rate | 5.8† | 5.1† | 4.9 | 5.3 | − 25.1 | − 40.9 |
| Unemployment Rate (Seasonally Adjusted) | 5.7† | 5.3† | 5.3 | 5.4 | − 8.9 | − 40.7 |
| Agricultural Employment (000's) | .6† | .6† | .7 | .6 | + 46.2 | + 0.0 |
| Establishment Based Industrial Employment | | | | | | |
| Total All Industries (000's) | 115.5† | 116.5† | 117.2 | 116.4 | + 2.0 | + 5.0 |
| Mining | .7† | .7† | .7 | .7 | + 5.0 | + 23.5 |
| Contract Construction | 5.1† | 5.2† | 5.4 | 5.2 | + 4.7 | + 9.8 |
| Manufacturing | 7.8† | 7.7† | 7.7 | 7.7 | − .9 | + 5.0 |
| Transportation & Utilities | | | | | | |
| Transportation | 4.0† | 4.0† | 4.0 | 4.0 | + 0.0 | + 5.3 |
| Railroads | .4† | .4† | .4 | .4 | + 0.0 | + 0.0 |
| Public Utilities | 4.0† | 4.1† | 4.1 | 4.1 | + .8 | − 3.2 |
| Total Trade | 25.4† | 25.6† | 25.7 | 25.6 | + 1.3 | + 7.6 |
| Wholesale Trade | 6.0† | 6.1† | 6.1 | 6.1 | + 2.2 | + 2.8 |
| Retail Trade | 19.4† | 19.5† | 19.6 | 19.5 | + 1.0 | + 9.1 |
| Finance, Ins., Real Estate | 6.2† | 6.1† | 6.1 | 6.1 | − 1.6 | − .5 |
| Service Industries | 45.5† | 46.1† | 47.0 | 46.2 | + 4.4 | + 6.0 |
| Hotels, Gaming & Recreation | 29.3† | 29.9† | 30.7 | 30.0 | + 7.2 | + 9.8 |
| Total Government | 16.8† | 17.0† | 16.5 | 16.8 | − .6 | + .6 |
| Federal | 2.8† | 2.9† | 2.9 | 2.9 | + 2.4 | + 2.4 |
| State and Local | 14.0† | 14.1† | 13.6 | 13.9 | − 1.2 | + .2 |
| Education | 7.1† | 7.1† | 6.3 | 6.8 | − 1.0 | + 3.5 |
| Construction Activity | | | | | | |
| Reno | | | | | | |
| Residential ($000's) | 14,223 | 3,452 | 3,452 | 14,950 | − 6.6 | − 25.4 |
| Nonresidential ($000's) | 2,766 | 1,152 | 1,152 | 5,070 | + 28.0 | − 65.4 |
| Total Value ($000's) | 16,989 | 4,604 | 4,604 | 26,197 | + 31.3 | − 24.5 |
| # of New Family Units | 495 | 102 | 33 | 630 | + 141.4 | + 67.1 |
| Sparks | | | | | | |
| Residential ($000's) | 3,377 | 6,250 | ,619 | 10,246 | + 71.5 | − 35.6 |
| Nonresidential ($000's) | 3,256 | 1,640 | 1,180 | 6,076 | + 29.6 | + 111.3 |
| Total Value ($000's) | 6,633 | 7,890 | 1,799 | 16,322 | + 53.1 | − 13.1 |
| # of New Family Units | 56 | 116 | 8 | 180 | + 37.4 | − 70.7 |
| Washoe County (Unincorporated) | | | | | | |
| Residential ($000's) | 7,705 | 5,694 | 1,151 | 14,550 | − 4.8 | + 3.9 |
| Nonresidential ($000's) | 1,150 | 3,174 | 1,508 | 5,832 | + 5.8 | + 150.8 |
| Total Value ($000's) | 8,855 | 8,868 | 3,059 | 20,782 | − .1 | + 9.4 |
| # of New Family Units | 78 | 68 | 13 | 159 | − 5.9 | − 8.6 |
| Taxable Sales ($000's) | − | − | − | 471,926 | + 17.2 | + 15.5 |
| Gaming Revenues ($000's) | − | − | − | 168,319 | + 17.3 | + 9.1 |
| Air Transportation-Reno | | | | | | |
| Passengers (Arr. & Depart.) | 253,913 | 232,305 | 217,570 | 703,788 | − 6.0 | + 3.9 |
| Cargo Enplaned (lbs.) | 601,370 | 620,827 | 565,151 | 1,787,348 | + 7.8 | + 24.9 |
| Cargo Deplaned (lbs.) | 673,786 | 664,805 | 599,280 | 1,937,871 | + 1.5 | + 11.4 |
| Highway Traffic Flow | | | | | | |
| 7 Selected Stations (Avg. Daily) | 63,118 | 67,713 | 78,773 | 69,868 | + 26.5 | + 4.1 |
| Room Tax ($) | | | | | | |
| Washoe County | 63,552 | 50,188 | 51,872 | 165,612 | − 11.5 | + 10.6 |
| Reno | 746,803 | 743,945 | 849,912 | 2,340,660 | + 62.6 | + 32.9 |
| Sparks | 32,411 | 64,027 | 48,937 | 145,375 | + 56.8 | + 31.2 |
| SMSA Total | 842,766 | 858,160 | 950,721 | 2,651,647 | + 54.3 | + 31.2 |

† Revised.

# Nevada Statistical Data by County

| | April 1984 | May 1984 | June 1984 | 2nd Quarter 1984 | PERCENT CHANGE 1st Quarter-1984 2nd Quarter-1984 | PERCENT CHANGE 2nd Quarter-1983 2nd Quarter-1984 |
|---|---|---|---|---|---|---|
| **CARSON CITY** | | | | | | |
| Total Labor Force | 20,580† | 20,600† | 20,620 | 20,600 | + .5 | + 1.7 |
| Total Employment | 18,860† | 19,080† | 19,180 | 19,040 | + 3.3 | + 3.2 |
| Unemployment | 1,720† | 1,520† | 1,440 | 1,560 | − 25.1 | − 38.0 |
| Unemployment Rate | 8.3† | 7.4† | 7.0 | 7.6 | − 25.6 | − 36.9 |
| Construction Activity | | | | | | |
| Residential Value ($000's) | 1,428 | 1,938 | 1,602 | 4,968 | + 63.2 | + 31.1 |
| Nonresidential Value ($000's) | 920 | 890 | 714 | 2,524 | + 11.5 | + 26.6 |
| Total Value ($000's) | 2,348 | 2,828 | 2,316 | 7,492 | + 41.2 | + 29.6 |
| # of New Family Units | 16 | 27 | 19 | 62 | + 26.5 | + 8.8 |
| Taxable Sales ($000's) | − | − | − | 64,590 | + 16.2 | + 20.8 |
| Gaming Revenues ($000's) | − | − | − | 10,472 | + 26.1 | + 18.7 |
| **CHURCHILL** | | | | | | |
| Total Labor Force | 6,730† | 6,720† | 6,840 | 6,763 | + 2.4 | − 1.6 |
| Total Employment | 6,040† | 6,130† | 6,310 | 6,160 | + 6.6 | + 4.6 |
| Unemployment | 690† | 590† | 530 | 603 | − 27.0 | − 38.4 |
| Unemployment Rate | 10.2† | 8.8† | 7.7 | 8.9 | − 29.0 | − 37.8 |
| Construction Activity | | | | | | |
| Residential Value ($000's) | 666 | 331 | 206 | 1,203 | + 119.9 | + 16.8 |
| Nonresidential Value ($000's) | 0 | 0 | 0 | 131 | + 178.7 | − 35.8 |
| Total Value ($000's) | 666 | 331 | 337 | 1,334 | + 124.6 | + 8.1 |
| # of New Family Units | 10 | 4 | 2 | 16 | + 100.0 | + 33.3 |
| Taxable Sales ($000's) | − | − | − | 19,932 | + 33.4 | + 20.4 |
| Gaming Revenues ($000's) | − | − | − | 1,289 | NA | + 9.3 |
| **DOUGLAS** | | | | | | |
| Total Labor Force | 8,730† | 8,840† | 9,180 | 8,916 | + 5.1 | + .2 |
| Total Employment | 8,140† | 8,310† | 8,650 | 8,366 | + 6.5 | + 4.4 |
| Unemployment | 590† | 530† | 530 | 550 | − 12.7 | − 37.7 |
| Unemployment Rate | 6.8† | 6.0† | 5.8 | 6.2 | − 16.6 | − 37.8 |
| Taxable Sales ($000's) | − | − | − | 56,394 | + 8.6 | + 24.7 |
| Gaming Revenues ($000's) | − | − | − | 70,667 | + 10.2 | + 30.7 |
| **ELKO** | | | | | | |
| Total Labor Force | 13,000† | 13,130† | 13,570 | 13,233 | + 3.9 | − 2.3 |
| Total Employment | 12,110† | 12,380† | 12,850 | 12,446 | + 6.8 | − .2 |
| Unemployment | 890† | 750† | 720 | 786 | − 27.4 | − 27.4 |
| Unemployment Rate | 6.8† | 5.7† | 5.3 | 5.9 | − 30.2 | − 25.8 |
| Construction Activity | | | | | | |
| Elko City | | | | | | |
| Residential ($000's) | 688 | 706 | 287 | 1,681 | + 62.6 | + 70.3 |
| Nonresidential ($000's) | 252 | 3,442 | 98 | 3,792 | + 1,740.8 | + 900.5 |
| Total Value ($000's) | 940 | 4,148 | 385 | 5,473 | + 308.4 | + 300.7 |
| # of New Dwelling Units | 11 | 12 | 4 | 27 | − 20.6 | + 17.4 |
| Taxable Sales ($000's) | − | − | − | 45,149 | + 19.7 | + 11.0 |
| Gaming Revenues ($000's) | − | − | − | 18,421 | + 25.7 | + 16.5 |
| **ESMERALDA** | | | | | | |
| Total Labor Force | 390† | 380† | 390 | 386 | + 23.4 | − 13.4 |
| Total Employment | 340† | 340† | 350 | 343 | + 27.2 | − 7.2 |
| Unemployment | 50† | 40† | 40 | 43 | + 0.0 | − 43.5 |
| Unemployment Rate | 13.6† | 10.4† | 11.3 | 11.8 | − 22.8 | − 29.5 |
| Taxable Sales ($000's) | − | − | − | 2,111 | + 14.5 | + 32.8 |
| **EUREKA** | | | | | | |
| Total Labor Force | 770† | 780† | 870 | 806 | + 12.6 | − 2.0 |
| Total Employment | 710† | 730† | 800 | 746 | + 15.5 | + 2.3 |
| Unemployment | 60† | 50† | 70 | 60 | − 14.3 | − 35.7 |
| Unemployment Rate | 7.5† | 6.6† | 7.9 | 7.3 | − 22.8 | − 34.7 |
| Taxable Sales | − | − | − | 3,154 | + 6.4 | + 30.8 |

# Nevada Statistical Data by County (Continued)

| | April 1984 | May 1984 | June 1984 | 2nd Quarter 1984 | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | | | | | 1st Quarter-1984 2nd Quarter-1984 | 2nd Quarter-1983 2nd Quarter-1984 |
| HUMBOLDT | | | | | | |
| Total Labor Force | 5,650† | 5,680† | 5,940 | 5,756 | + 5.8 | – 2.6 |
| Total Employment | 5,160† | 5,270† | 5,530 | 5,320 | + 10.4 | + 1.6 |
| Unemployment | 490† | 410† | 410 | 436 | – 29.9 | – 35.1 |
| Unemployment Rate | 8.7† | 7.3† | 6.9 | 7.6 | – 33.2 | – 33.2 |
| Taxable Sales ($000's) | – | – | – | 24,550 | + 20.6 | – 9.0 |
| Gaming Revenues ($000's) | – | – | – | 2,186 | NA | – 7.0 |
| LANDER | | | | | | |
| Total Labor Force | 2,490† | 2,530† | 2,600 | 2,540 | + 5.4 | + 8.9 |
| Total Employment | 2,320† | 2,370† | 2,460 | 2,383 | + 8.2 | + 18.6 |
| Unemployment | –† | –† | – | .0 | – 100.0 | – 100.0 |
| Unemployment Rate | –† | –† | – | 0.0 | – 100.0 | – 100.0 |
| Taxable Sales ($000's) | – | – | – | 8,821 | + .9 | – 17.2 |
| LINCOLN | | | | | | |
| Total Labor Force | 2,540† | 2,550† | 2,580 | 2,556 | + 1.2 | – 3.0 |
| Total Employment | 2,380† | 2,410† | 2,440 | 2,410 | + 2.6 | + .6 |
| Unemployment | 160† | 140† | 140 | 146 | – 17.0 | – 38.9 |
| Unemployment Rate | 6.2† | 5.3† | 5.4 | 5.6 | – 19.5 | – 38.3 |
| Taxable Sales ($000's) | – | – | – | 3,083 | + 53.0 | + 10.8 |
| LYON | | | | | | |
| Total Labor Force | 5,880† | 5,940† | 6,080 | 5,966 | + 6.0 | + 6.8 |
| Total Employment | 5,290† | 5,420† | 5,590 | 5,433 | + 9.2 | + 11.6 |
| Unemployment | 590† | 520† | 490 | 533 | – 17.9 | – 25.9 |
| Unemployment Rate | 10.0† | 8.7† | 8.1 | 8.9 | – 22.8 | – 30.9 |
| Construction Activity | | | | | | |
| Residential Value ($000's) | NA | NA | NA | NA | NA | NA |
| Nonresidential Value ($000's) | NA | NA | NA | NA | NA | NA |
| Total Value ($000's) | NA | NA | NA | NA | NA | NA |
| # of New Family Units | NA | NA | NA | NA | NA | NA |
| Taxable Sales ($000's) | – | – | – | 13,890 | + 15.6 | + 12.2 |
| MINERAL | | | | | | |
| Total Labor Force | 3,900† | 3,920† | 4,000 | 3,940 | + 2.6 | + 5.5 |
| Total Employment | 3,690† | 3,720† | 3,770 | 3,726 | + 3.5 | + 7.9 |
| Unemployment | 210† | 200† | 230 | 213 | – 11.1 | – 23.8 |
| Unemployment Rate | 5.5† | 5.1† | 5.7 | 5.4 | – 12.8 | – 26.9 |
| Taxable Sales ($000's) | – | – | – | 5,828 | + 4.0 | + 12.2 |
| NYE | | | | | | |
| Total Labor Force | 3,560† | 3,600† | 3,690 | 3,616 | + 2.8 | + .7 |
| Total Employment | 3,390† | 3,440† | 3,500 | 3,443 | + 3.4 | + 4.2 |
| Unemployment | 170† | 160† | 190 | 173 | – 7.1 | – 39.5 |
| Unemployment Rate | 4.6† | 4.5† | 5.2 | 4.8 | – 11.7 | – 40.4 |
| Taxable Sales ($000's) | – | – | – | 19,548 | + 11.9 | – 24.5 |
| Gaming Revenues ($000's) | – | – | – | 1,444 | NA | + 23.2 |
| PERSHING | | | | | | |
| Total Labor Force | 1,870† | 1,860† | 1,920 | 1,883 | + 3.5 | + 5.0 |
| Total Employment | 1,760† | 1,780† | 1,840 | 1,793 | + 6.7 | + 6.3 |
| Unemployment | 110† | 80† | 80 | 90 | – 35.7 | – 15.6 |
| Unemployment Rate | 5.6† | 4.3† | 4.2 | 4.7 | – 38.7 | – 22.5 |
| Taxable Sales ($000's) | – | – | – | 4,553 | + 62.0 | + 14.2 |

† Revised.

# Nevada Statistical Data by County (Continued)

| | April 1984 | May 1984 | June 1984 | 2nd Quarter 1984 | PERCENT CHANGE 1st Quarter-1984 2nd Quarter-1984 | PERCENT CHANGE 2nd Quarter-1983 2nd Quarter-1984 |
|---|---|---|---|---|---|---|
| **STOREY** | | | | | | |
| Total Labor Force | 1,310† | 1,330† | 1,420 | 1,353 | + 7.4 | − 9.0 |
| Total Employment | 1,110† | 1,160† | 1,230 | 1,166 | + 12.5 | − 5.7 |
| Unemployment | 200† | 170† | 190 | 186 | − 16.4 | − 25.3 |
| Unemployment Rate | 15.2† | 13.1† | 13.1 | 13.8 | − 23.0 | − 18.0 |
| Taxable Sales ($000's) | – | – | – | 2,792 | + 76.7 | + 13.5 |
| Gaming Revenues ($000's) | – | – | – | 645 | NA | + 19.4 |
| **WHITE PINE** | | | | | | |
| Total Labor Force | 4,700† | 4,680† | 4,770 | 4,716 | + 1.9 | + 9.9 |
| Total Employment | 3,990† | 4,080† | 4,160 | 4,076 | + 6.4 | + 15.7 |
| Unemployment | 710† | 600† | 610 | 640 | − 19.7 | − 16.5 |
| Unemployment Rate | 15.2† | 12.9† | 12.8 | 13.6 | − 20.9 | − 23.6 |
| Construction Activity | | | | | | |
| Total Value ($000's) | 186 | 376 | 1,180 | 1,742 | + 416.9 | + 36.7 |
| # of Permits | 28 | 42 | 29 | 99 | + 80.0 | + 98.0 |
| Taxable Sales ($000's) | – | – | – | 10,802 | + 22.5 | + 6.0 |
| Gaming Revenues ($000's) | – | – | – | 569 | NA | + 12.7 |

† Revised.

# Selected U.S. Economic Indicators

## Consumer Price Index & Indexes of Selected Categories All Urban Consumers (1967 = 100%)

| | | | | | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | April 1984 | May 1984 | June 1984 | 2nd Quarter 1984 | 1st Quarter-1984 2nd Quarter-1984 | 2nd Quarter-1983 2nd Quarter-1984 |
| All Items | 308.8 | 309.7 | 310.7 | 309.7 | + 1.1 | + 4.5 |
| Food | 302.3 | 301.4 | 302.0 | 301.9 | + 1.1 | + 6.0 |
| Housing | 333.2 | 334.6 | 336.2 | 334.7 | + 1.2 | + 4.3 |
| Apparel and Upkeep | 199.2 | 198.9 | 197.4 | 198.5 | + .7 | + 1.7 |
| Transportation | 309.6 | 312.2 | 313.1 | 311.6 | + 1.8 | + 5.1 |
| Medical Care | 375.7 | 376.8 | 378.0 | 376.8 | + 1.2 | + 6.9 |

## Producer Price Indexes for Selected Commodity Groupings (1967 = 100%)

| | | | | | | |
|---|---|---|---|---|---|---|
| All Commodities | 311.4 | 311.7 | 311.4 | 311.5 | + .7 | + 3.3 |
| Fuel and Power | 656.5 | 662.7 | 667.9 | 662.4 | + .8 | + .8 |
| Machinery and Equipment | 292.4 | 292.8 | 293.1 | 292.8 | + .8 | + 2.6 |
| Metals and Metal Products | 317.8 | 317.1 | 317.2 | 317.4 | + .9 | + 3.7 |
| Nonmetallic Mineral Products | 335.6 | 337.3 | 338.4 | 337.1 | + 1.7 | + 4.0 |
| Textile Products & Apparel | 209.6 | 210.5 | 210.3 | 210.1 | + .5 | + 3.1 |

## U.S. Labor Force

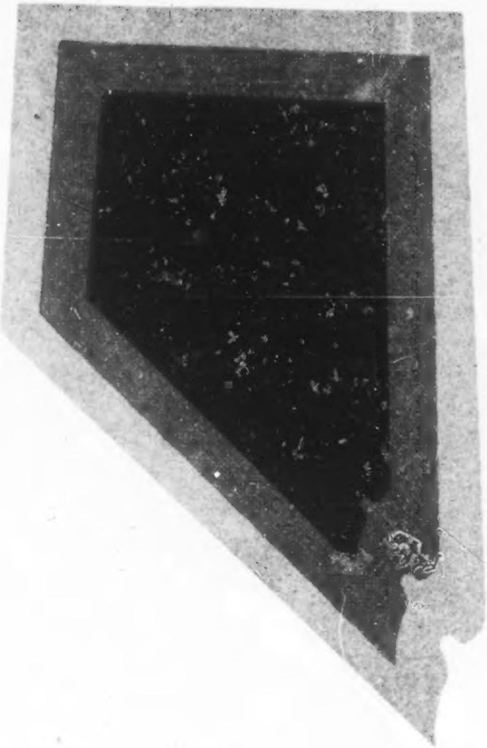
| | | | | | | |
|---|---|---|---|---|---|---|
| Civilian Labor Force (000's) | 113,245 | 113,803 | 113,877 | 113,641 | + 2.0 | + 2.2 |
| Total Employment (000's) | 104,402 | 105,288 | 105,748 | 105,146 | + 3.1 | + 5.1 |
| Unemployment (000's) | 8,843 | 8,515 | 8,129 | 8,495 | − 9.7 | − 23.6 |
| Unemployment Rate | 7.8 | 7.5 | 7.1 | 7.5 | − 11.8 | − 25.1 |
| Unemployment Rate (Seasonally Adjusted) | 7.8 | 7.5 | 7.1 | 7.5 | − 5.1 | − 26.1 |

## DATA SOURCES

*Information for statistical tables were developed in cooperation with the following sources:*

Bell Telephone Company of Nevada; California Pacific Utilities Co.; Central Telephone Co.; Churchill County Telephone & Telegraph System; Continental Telephone Co.; F. W. Dodge Co.; Elko City Engineer; City of Fallon; Federal Reserve Bank of San Francisco; First American Title Co. of Nevada (Reno); Lake Mead National Recreation Area; Las Vegas Convention Authority; Las Vegas Dept. of Building & Safety; Lincoln County Telephone System; McCarran International Airport; Moapa Valley Telephone Co.; Mt. Wheeler Power Co.; Nevada Dept. of Highways; Nevada Department of Taxation - Cigarette, Liquor, Fuel, and Sales and Use Tax Divisions; Nevada Employment Security Dept.; Nevada Gaming Commission; Nevada Power Co. - Las Vegas and Elko Divisions; Nevada Telephone & Telegraph Co.; North Las Vegas Building Dept.; Reno Building Inspection Dept.; Reno International Airport; Reno-Sparks Convention Authority; Rio Virgin Telephone Co.; Sparks Convention Authority; Rio Virgin Telephone Co.; Sierra Pacific Power Co.; Sparks Building Dept.; U.S. Dept. of Agriculture-Statistical Reporting Service; U.S. Dept. of Commerce-Bureau of Economic Analysis; Dept. of Labor - Bureau of Labor Statistics; White Pine County Regional Planning Commission.

U7920-1A



# NEVADA REVIEW of BUSINESS & ECONOMICS

WINTER 1984-85

*Bureau of Business & Economic Research*
*College of Business Administration*
*University of Nevada, Reno*

# NEVADA REVIEW of BUSINESS & ECONOMICS

UNIVERSITY OF NEVADA, RENO
Joseph N. Crowley, *President*

COLLEGE OF BUSINESS ADMINISTRATION
Gordon G. Severance, *Acting Dean*

BUREAU OF BUSINESS AND ECONOMIC RESEARCH
Samuel Males, *Acting Director and Operations Manager*

Albin J. Dahl, *Editor*

Carol Koletar
*Secretary*

Sherrie Bianco
*Clerical Assistant*

Glen Atkinson
*Research Faculty*

Thomas F. Cargill
*Research Faculty*

John L. Dobra
*Research Faculty*

William R. Eadington
*Research Faculty*

Gano S. Evans
*Research Faculty*

Kyung-Il (Ed) Ghymn
*Research Faculty*

Winnie Moore
*Research Assistant*

James Newman
*Research Assistant*

Nevada Review of Business and Economics
A Quarterly Publication
(ISSN 0148-5881)

Copyright 1985 by
The Bureau of Business and
Economic Research
University of Nevada, Reno

POSTMASTER:

Please send Form 3759 to:

Bureau of Business and Economic Research
University of Nevada, Reno
Reno, NV 89557-0016

Phone: (702) 784-6877

Second Class Postage Paid at Reno, NV.

# In This Issue

**Winter 1984-85 1984** **Volume VIII, No. 4**

The Role of Computers in Local Government: A Look at Innovative Applications In Clark County, Nevada .......... 2
*Cheryl G. Miller and Alan N. Miller*

Androgyny: The Key to Successfully Managing Today's Public Accounting Firms? .......... 9
*Rebekah Maupin*

A Salary Survey of CPA Firms in the Reno/Sparks Area .......... 12
*B. J. Fuller*

Strategies for the Nevada Businessman After the Deficit Reduction Act of 1984 .......... 14
*Robert E. Blatz, Jr. and John M. Strefeler*

A Reexamination of the Relationship Between the Marginal Cost of Capital and Capital Budget Size .......... 20
*Frederick C. Scherr*

The Gambling Studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking .......... 25
*William R. Eadington*

Nevada Economic Indicators
- Statewide Statistical Data .......... 26
- Las Vegas SMSA Data .......... 28
- Reno SMSA Data .......... 29
- Nevada Statistical Data by County .......... 30

---

## EDITORIAL REVIEW BOARD

Glen Atkinson
UNIVERSITY OF NEVADA, RENO

William Bible
NEVADA STATE
BUDGET DIRECTOR

Ben Dasher
UNIVERSE LIFE INSURANCE CO.

Gano S. Evans
UNIVERSITY OF NEVADA, RENO

B. J. Fuller
UNIVERSITY OF NEVADA, RENO

Kyung-Il (Ed) Ghymn
UNIVERSITY OF NEVADA, RENO

Andrew Grose
CHIEF OF STAFF
GOVERNOR'S OFFICE
STATE OF NEVADA

Bernard Malamud
UNIVERSITY OF NEVADA, LAS VEGAS

John Nellor
UNIVERSITY OF NEVADA, RENO

Robert C. Weems
UNIVERSITY OF NEVADA, RENO

Sam E. White
UNIVERSITY OF PORTLAND
PORTLAND, OREGON

Richard E. Wilson
UNIVERSITY OF NEVADA, RENO

Don W. Winne
UNIVERSITY OF NEVADA, RENO

Betty Yantis
UNIVERSITY OF NEVADA, LAS VEGAS

---

In an effort to assure that the articles appearing in the *Review* meet standards which are consistent with the goals of the College of Business Administration and the University of Nevada, Reno, the Editorial Review Board has been created to referee manuscripts submitted for publication. All articles which pertain to the business and economic environment of Nevada and are of a high quality will be considered for publication. All manuscripts should be addressed to the Editor, *Nevada Review of Business and Economics,* Bureau of Business and Economic Research, University of Nevada, Reno, Reno, Nevada 89557-0016.

# The Role of Computers in Local Government: A Look at Innovative Applications in Clark County, Nevada

By Cheryl G. Miller and Alan N. Miller*

*This article examines four novel computer applications which were implemented by Clark County, Nevada. First, the County Automotive Report System (CARS) was used to automate the county's 1800 vehicle Fleet Management System. Second, the Clark County Criminal Case Tracking System (C-TRACK) is a computer-based management information system designed to enable county prosecutors and courts to exert control over their workloads. Third, the computerized Document Indexing System was implemented in the County Recorder's Office to reduce personnel and to facilitate access to indexes. Finally, the Clark County Resources Information System (CCRIS) was used to develop the county Master Plan. These applications may serve as useful guides to other local governments.*

> "When digital computers became commercial, just after World War II, forecasters predicted that no more than a dozen machines ever would be needed. . . . Yet this year, for the first time, computers on the planet will outnumber people. . . . By the end of 1982, more than five billion computers of all sizes, from microprocessors to mainframes, will be in use."[18].

## The Use of Computers in Local Government

A few large cities and counties began putting records into computers in the late 1950s. During the 1960s, local government officials began to understand and experiment with the potential use of computers in daily operations.[1] The first activities automated were what can be called "housekeeping" tasks — accounting and financial control, tax accounting and billing, utility billing, payroll processing, and a variety of recordkeeping chores. Besides being the very oldest uses for computers, these tasks — essentially the sorting, counting, recording and arithmetic that were once done by hand — were easy and relatively inexpensive to automate. The payoff on the investment was very high, sometimes in terms of efficiency and service, sometimes in dollars saved or revenues increased.

The growth of local government electronic data processing (EDP) surged in the 1970s. Simultaneously, the cost of computer mainframes decreased. The lower costs and greater flexibility of equipment made it possible for many cities and counties, especially those under 100,000 population, to acquire their own computers or share the computer facilities of other governments.

An extensive national survey of city and county computer use was taken in 1975 by the Public Policy Research Organization (PPRO).[2] It revealed that 99 percent of the counties 100,000 and over used computers. EDP was used by 92 percent of the cities and 80 percent of the counties with populations of 50,000-99,999.

The PPRO survey also revealed that 48 percent of the EDP adoptions by local government occured since 1970. This information contrasted sharply with earlier surveys which indicated that the 1960s were the peak growth years for local government EDP and predicted that subsequent years would show a decrease in the rates of adoption [13,15,19,20].

In 1978, the International City Management Association (ICMA) looked more closely at cities of less than 50,000 and counties less than 100,000. Their survey showed that 71.2 percent of the small cities and 51.4 percent of the counties utilized EDP. The adoption of computers in these small local governments had occurred in the 1970s [1].

Besides improvements in computer technology, another factor which contributed to the growth of EDP in local government during the 1970s was the support of the federal government for local computer systems, especially in law enforcement.[3] The federally supported computer applications were usually required to be dedicated to specific functions which could not be shared with other operating units within local government. Thus, these computer applications served a limited role in overall local government operations.

A survey conducted in 1979 by the City of Las Vegas examined the data processing budgets of Las Vegas and Clark County, Nevada, and other cities in the U.S. The results of the survey (Table 1) suggest that local government expenditures for EDP are proportional to population size. Unfortunately, there have been no other comprehensive surveys of city and county computer use since the 1975 PPRO study and the 1978 ICMA study.

Southern Nevada local governments followed the national trends discussed earlier in this paper. Clark County acquired its first electronic data processor in 1959. By today's stan-

---

*Cheryl G. Miller is Director of Personnel, Clark County, Nevada, and Alan N. Miller is Associate Professor of Management, College of Business and Economics, University of Nevada, Las Vegas.

TABLE 1

**Analysis of Data Processing Budgets in Las Vegas, Clark County, NV and other Selected Cities (1979)**

| CITY | FISCAL YEAR | 1979 POPULATION ESTIMATE | GENERAL FUND BUDGET | D.P. BUDGET | PERSONNEL IN D.P. | D.P. BUDGET AS PERCENTAGE OF GENERAL FUND BUDGET |
|---|---|---|---|---|---|---|
| Las Vegas, NV | 79-80 | 167,900 | 50,746,255 | 611,360 | 27 | 1.24 |
| Clark County, NV | 79-80 | 388,900 | 75,018,288 | 2,146,932 | 63 | 2.86 |
| Anchorage, AL | 79-80 | 194,500 | 96,033,470 | 816,930 | 30 | .85 |
| Charlotte, NC | 78-79 | 368,500 | 134,045,109 | 1,341,823 | 57 | 1.00 |
| Omaha, NB | 78-79 | 381,900 | 55,153,097 | 571,244 | 34 | 1.03 |
| New Orleans, LA | 78-79 | 528,200 | 214,830,890 | 2,368,619 | 84 | 1.10 |
| Virginia Beach, VA | 79-80 | 237,000 | 170,696,348 | 2,118,896 | 84 | 1.24 |
| Tucson, AZ | 78-79 | 308,900 | 111,212,355 | 2,166,348 | 60 | 1.94 |
| Long Beach, CA | 78-79 | 342,000 | 133,531,209 | 3,212,909 | — | 2.40 |

Source: City of Las Vegas, Department of Management Information Services, "Proposal for Computer System Expansion and Upgrade." (unpublished) October 1979.

dards, this computer is primitive. The first activities automated were the "housekeeping" tasks. As smaller, easier to use, less costly, and more flexible computers became available through technological advances, Clark County acquired additional computing equipment and hired trained personnel to implement new computer applications. Today, Clark County has the largest computing resources of all local governments in southern Nevada: 12 CPU's with a total memory of 20.152 MB and 525 CR terminals located throughout its operating departments.

## INNOVATIVE APPLICATIONS

Let us now examine four of Clark County's most novel computer applications. These applications have received national awards and recognition as being highly innovative and cost effective.

### County Automotive Report System (CARS)

This system automated the county's 1800 vehicle Fleet Management System. In general, CARS is a computer based management information system which provides for the immediate collection, update and retrieval of information pertaining to individual fuel, vehicle maintenance, inventories, costs, and fleet usage that is used in making management decisions regarding automotive functions. The major objectives of the system are:

- Immediate access to all information about Clark County's fleet;
- Proper accounting for vehicle maintenance and fuel usage;
- Planning for fleet management and justifying budget requests;
- Logistical control of file maintenance and computer operations in the Automotive Department;
- Proper backup and large machine processing by Clark County's Central Processing Department; and
- Daily fleet maintenance reports.

The system has reduced the number of fuel attendants from six to two. The drivers fill their own gas tanks. The system provides accurate and timely information concerning fuel loss due to theft or tank leaks. File maintenance is immediate. Automotive personnel no longer find it necessary to proofread fuel tickets and repair orders before sending them to Data Processing. This process previously required approximately two weeks turn-around. Now Automotive staff proofreads and enters the repair orders into the computer the same day they receive them from the various shops. Fuel is handled automatically from pump to computer. Fuel purchases from gas stations (approximately 15 percent of transactions) are also entered immediately when received. All day-to-day and weekly accounting and management reports are printed directly in the Automotive office.

Clark County Automotive assumed all costs for this program. There were no grants available. Approximate costs were as follows:

| | | |
|---|---|---|
| Phase One | Batch Record System | $ 40,000 |
| Phase Two | Automatic Fuel Dispensing | 120,000 |
| Phase Three | Distributed Computer | 96,000 |
| | All Programming | 80,000 |
| | | $336,000 |

### Clark County Criminal Case Tracking System (C-TRACK)

C-TRACK is a computer-based management information system. It is designed for the Clark County District Attorney's Office to enable prosecutors and courts to control their workloads. The objectives of the system are to provide the greatest amount of information processing power for the dollars invested and to increase the scope of information available. The system includes data input and retrieval capabilities which interface with all entities of the local criminal justice system. This system allows for consistent, effective prosecution. Specifically, C-TRACK was established to realize the following benefits:

- Immediate access to information data files used in everyday operation of the prosecutor's office;
- Management controls in the form of notification lists, tickler lists, and the corresponding action that should be performed;
- Generation of statistics for use by the office and budgeting agencies to aid in justifying budget requests. Such statistics would also be used to review and analyze the overall activity of the office and determine crime trends within Clark County.
- Interface with the state and regional criminal justice systems for extraction of information and data between agencies;
- A master list for docket and calendar control within the prosecutor's office;
- An activity and responsibility list of each attorney in the office to assist in the assignment process;
- A case status tracking system to assure the prosecutor's office that each criminal matter will be effectively pursued in a timely fashion.

In the early 1970s Clark County, like many American judicial districts, experienced an increase in the rate of crime. Accompanying this was an increase in felony submissions to the Clark County District Attorney's Office. As a result of the increased caseload, the local District Attorney's Office was unable to meet case control and data retrieval needs.

Phase I of the C-TRACK system (Prosecutor's Management Information System - PROMIS) became operational on July 1, 1977. This system was a batch entry and update system without immediate retrieval access to case file or defendant data that had been put into the computer. Even without this capability, PROMIS made it possible for subpoenas to be generated automatically rather than typed by hand. The average output by this system was 3,400 subpoenas per month. Although the data base provided limited statistical information, it was equal to that information produced manually. Prior to the implementation of PROMIS, the District Attorney's Office utilized two secretaries at 60 percent of their time to extract data for statistical purposes. Using PROMIS, an average of one report per month was supplied for the District Attorney's Office.

In 1977, the Clark County District Attorney's Office received approval from the Las Vegas Metropolitan Police Department to have terminal access to the Shared Computer Operations for Protection and Enforcement System, and the Nevada Wanted Vehicles System. These were two of the interface programs developed with the original PROMIS system.

During 1977, 421 cases were entered into this system. In 1978, 624 cases were entered; in 1979, 5,000 cases were entered, and by 1981, over 30,000 cases with initial case file and defendant data were available through PROMIS.

Development of the data base for the C-TRACK system continued at the same time that PROMIS was operational. County data processing personnel were used for this purpose and, therefore, funds which were originally designed to pay outside consultants were kept within the county. C-TRACK took 15 months to implement and was put into operation in December 1981.

C-TRACK has immediate update and retrieval capabilities as opposed to the PROMIS batch update system. Entry clerks can verify the information they post and additional users have immediate access to the new data. Under C-TRACK, all entities of the criminal justice system in Clark County have entry and retrieval capabilities. The District Attorney's Office, the Las Vegas Justice and District Courts, the Public Defender's Office and the outlying courts can enter their own data. Original entry data serve as a base, and screens specifically designed to meet the data monitoring needs of separate agencies are part of the computer logic. Also, cross referencing is possible using C-TRACK, a service not available in PROMIS. A variety of identifiers are used to locate case information, such as the complaint number, the defendant's name, the witness' name, etc.

When the PROMIS system became operational in July 1977, Clark County was the tenth jurisdiction in the country to have a prosecutor's management information system. With the application of the C-TRACK system, Clark County was again the tenth jurisdiction to have the C-TRACK system. However, Clark County has the distinction of being the first jurisdiction to implement C-TRACK without contractual assistance from any external source. By tailoring the basic C-TRACK software package system to fit the specific needs of Clark County, the Data Processing Department saved the county at least $12,000 in contract fees.

The original PROMIS system was funded by a two-year federal Law Enforcement Assistance Administration grant. It cost $60,392 ($54,353 federal and $6,039 matching funds). PROMIS development used these funds during the two-year development phase; equipment was purchased, on-site visits were made, and personnel salaries were paid.

After the grant was completed, PROMIS continuation funding was absorbed by Clark County through the budgets of the District Attorney's Office and Data Processing Services. C-TRACK is entirely funded by Clark County, with terminal access at all points within the county judicial system.

C-TRACK can generate court dockets, calendar lists, and tickler lists. Previously, such information was culled manually by District Attorney and Justice Court staff. When C-TRACK was assigned this function, this information became accessible at terminal sites in the offices of the county's defense and prosecuting attorneys, court personnel, and the District Attorney records section. The only cost to Clark County for this improvement was the cost of printing the lists.

## Computerized Document Indexing

The computerized document indexing system was implemented in the Clark County Recorder's Office to bring about personnel cost savings and more timely availability of the indexes. It was also designed to facilitate access to indexes by outside users, both in the public and private sectors. The names of the principal parties to all documents are entered into the system on the same day they are recorded. The index is updated overnight and available via computer terminals in the Recorder's Office and in various users' offices at the start of business the next day.

Documents recorded over the past twelve months are accessible to this system; prior months' activities are available on computer-produced microfilm. The system replaced an indexing method based on hand filing computer-printed index cards. The index card system had become antiquated, mainly due to the amount of staff time and overtime required to file the increasing volume of cards, the lack of file security, and the necessity of knowing the exact spelling of a name.

The main goal of the computerized document indexing program was to implement a system that would meet the following criteria:

- Eliminate the problems inherent in the manual filing system;
- Be responsive to future volume increases without greatly increasing costs.

The problems of the manual filing system were identified and provided a basis for developing the program:

- File integrity — index cards could be removed from the file, or cards could be misfiled.
- Timeliness — depending on the volume of cards, it might take more than one day to hand-file the cards.
- Search capability — exact spelling of a name was required to locate the index card.
- Public relations — unresponsive to public needs. Confusion resulted from public access and recorder filing at the same time.
- Personnel — increasing numbers of file clerks required to handle increases in volume. Difficulty in retaining clerks due to monotony of hand filing index cards.
- Office space — file cabinets took up space that could be better utilized to improve customer service.

A cost study was performed in late 1978 by the Data Processing Department's systems analyst assigned to the County Recorder's office. The study determined that the manual system cost approximately $7,000 per month. When compared to a monthly cost of $3,000 for the proposed system — after one-time development costs of $5,000 — the conversion to the new system was cost-justifiable.

Design and development took place in the latter part of 1979 as a joint effort between County Data Processing Services and the Recorder. The system operates on the county's central IBM 370/158 computer. Three terminals and a printer are located in the Administrative Section for telephone inquiries and internal use. One terminal is used by the Data Processing Section for monitoring the file and for other data processing functions.

Since its implementation in January 1980, the on-line indexing system has satisfied its goals in the following ways:

- File integrity — the on-line index file is intact and cannot be entered or changed by unauthorized persons. Misfilings were eliminated.
- Timeliness — regardless of volume, the on-line file is updated each night and is available for inquiry at the start of business the next day.
- Search capability — the user has the option of specifying use of an exact name search or phonetic search which would access exact matches as well as names that sound like the subject name. Additionally, the search can be narrowed by date, type of document, and/or name of another principal party to the document. A printer is used to copy the information from the terminal for extensive searches where there are many pages of indexes, thereby eliminating handwriting the information.
- Public relations — customers are assisted in using the file. For frequent customers, training is provided so they can perform their own searches. Clerks are freed from filing duties and can provide more effective service to the customer. Office image to the customer is improved due to use of modern terminals rather than filing cabinets. Terminals located in outside user offices allow these customers to perform their own searches. The need for them to telephone or come in to the Recorder's Office is eliminated, thereby reducing office congestion.
- Personnel — file clerks are no longer bored by the monotony of filing cards and are more willing to help customers. The new system has greatly improved the morale of the employees.
- Office space — areas used by file cabinets now provide extended desk and counter areas for employees and customers as well as accommodating the three terminals in the Customer Service Section.
- Cost — costs for computer time for file updating are not significantly greater with each additional transaction as volume increases. File access costs are the same regardless of the number of inquiries to the file.
- File inquiry — all documents recorded in the last 12 months pertaining to any party can be located with a single inquiry to the on-line file.
- Backup — a microfiche backup of the file is produced monthly. If the on-line file is down, the microfiche, in conjunction with a supplemental hard copy, can be used to locate the desired information.

In addition to solving the problems of the manual system and providing a cost hedge against increased volume, the on-line system provides several spin-off benefits. Using the same terminals as are used to access the Recorder file, the County Assessor files can also be accessed. Any parcel can be accessed by owner name, street address, or parcel number. This capability is used to assist customers when they have incomplete information. For example, if a customer wants to see the deed for a particular property and does not now the owner's name, the Assessor's parcel file includes the recorder's document number by which title to the property was taken. This number is used to retrieve the microfilmed copy of the deed to the property, eliminating specific year searches. The appraised value from the Assessor's file is also used to provide a base value for computation of the Real Property Transfer Tax when an actual sale has not taken place and the customer is unable to provide an estimated market value. A second spin-off is access to the on-line file by other county departments and outside users, such as title companies. These users are charged on a per-transaction basis. Third, acquisition of the terminals has facilitated development of other on-line applications. A small file of marriages that was recorded at a later date than normal and marriages that have been subsequently corrected at the request of the parties can be accessed to facilitate marriage searches. This file was formerly a hard-copy file, maintained manually.

### Clark County Resources Information System (CCRIS)

The Clark County Resources Information System (CCRIS) project was initiated in late 1979 as a component of a broader geographic information system concept. Managed by the Department of Comprehensive Planning in association with the Department of Data Processing, CCRIS is the implemented first stage of a three-component effort which will include a georeferenced data base management system on the county central computer and, in the years to come, a very detailed engineering-oriented mapping system. The CCRIS system was designed primarily for application to Department of Comprehensive Planning analytical efforts and was structured and implemented by that department.

During 1982 Clark County created this unique and innovative computer mapping and analysis system which is being extensively used by planners, environmental scientists, and land resource decision makers. This application of recent technology has three components: 1) a super minicomputer with graphic devices and an extensive mapped data base; 2) a remote sensing center for the interpretation of aerial photography along with the processing of Landsat satellite imagery; and 3) a manual library of books, periodicals and maps. These components are comprehensively referenced through a computer to allow county analysts and decision-makers to employ an "information center" approach to the examination of land-related and socioeconomic phenomena.

CCRIS is an important system, used for the development of the County's Master Plan, environmental analysis including flooding studies and topographic visual impact examinations, and spatially-oriented socioeconomic evaluations.

In 1980, the Department of Comprehensive Planning suggested that it would be useful to automate geographically-referenced information for public sector programs and activities. The inclusion of references such as street addresses, UTM coordinates or latitude/longitude in the data file was viewed as a significant integration of otherwise unrelated information. While not a completely new approach to enhanced data consolidation and accessibility, this concept precipitated the decision to perform a series of studies intended to create a unified set of policies and programs known as the geographic information system (GIS). While many components make up this GIS program, the first to be fully implemented in the county was CCRIS.

The general GIS objectives are data integration and enhanced accessibility. CCRIS specifically addresses the needs of county planners, environmental scientists and land resource decision makers. The system provides: 1) multiple map overlay modeling capabilities; 2) satellite image processing; 3) data base management and a centralized information resources center; and 4) quick access to the most accurate natural resource and socioeconomic data available. More important, the system's information is being manipulated in unique ways so that sophisticated new analytical capabilities can be applied to contemporary problems. As a consequence, this program is meeting its objectives of enhanced productivity, increased data availability, improved analytical capabilities and better support for decision makers in land related issues.

The Geographic Information Division and its CCRIS system operate as a service agency to the Department of Comprehensive Planning and other public/private sector clients. Although only five and one-half professionals perform a majority of CCRIS' work, the following projects and activities have been accomplished:

- Over three hundred requests for 1980 census statistics and specially constructed thematic maps have been processed and filled from the automated census data manager.
- A Landsat project to examine urban growth in time series has reached its midpoint.
- A major update of the county's "Population Data" publication was accomplished through the census data base.
- A major visual impact project was accomplished in conjunction with Nevada Power, Los Angeles Water and Power and the U.S. Department of the Interior regarding the impact of new high voltage power lines near Henderson, Nevada.
- Extensive modeling of projected flood impacts in the Las Vegas Valley was accomplished on the system.
- All publications and manual maps were catalogued into the CCRIS library system and the new capabilities have been used extensively by staff members.
- Multiple map overlay modeling has been performed in support of the Clark County Master Plan Development effort.
- Mapping projects have been and are being performed for the Las Vegas Metropolitan Police Department, the Center for Business and Economic Research at the University of Nevada, Las Vegas, the County Office of Emergency Management, the Nevada Department of Transportation, the Fire Department, and the Election Department.

The only problem with CCRIS, as seen from the perspective of the Data Processing Department, is that it operates relatively independently from the general work of the Data Processing Department. As mentioned earlier, the GIS Division operates as a service agency to both departments within the county, and those outside. This puts it in direct competition with the Data Processing Department for information delivery. While the system stands alone, there is information in it which is also input into the main data processing computers. Particularly, information such as assessment roles is available through both systems. According to the Data Processing staff, their capability far exceeds that of the GIS Division in updating information and, therefore, they recommend that a Data Base Management System be acquired for GIS and installed on the county's mainframe computer.

The initial systems to be converted and their data loaded into the Data Base Management Systems (DBMS) are those with geographic attribute information necessary to the GIS project. The key advantages of changing to a Data Base Environment are: 1) better information — made more easily available to end user management; 2) increased productivity — by providing faster application program development and substantially decreased maintenance activity; and 3) greater responsiveness — by making systems more flexible it is possible to respond to end user requirements quickly. End user dependence on programmers can be reduced by allowing users to access data bases directly with high level query languages, report generators, and graphics facilities. This system could be completed in less than two years.

## FUTURE APPLICATIONS

What other uses will there be for the computer in local government during the 1980s? An interview conducted with Clark County's Director of Data Processing suggests the following possibilities:

- Operation of models that can determine such things as optimum routes for sanitation and service vehicles.
- Decision support systems for locating an optimum operating plan among several alternatives.
- Programs to determine optimum allocations of manpower and equipment for service crews.
- Programs and models to assist in establishing goals, objectives, budget priorities, etc.
- Simulations of possible outcomes of alternative courses of action that might be taken on various issues ("What if?" scenarios).
- Electronic mail through which the county commission, managers, and other key staff transmit messages from computer to computer. This will allow a person to leave messages without having to talk to several people on the telephone. The calling party enters a message into his or her desk-top computer to printout on a cathode ray screen messages stored periodically during the day.
- Energy conservation by warning of overheating or overcooling, doors and windows ajar, etc.
- Warning of unauthorized toxic substances in water supplies, or of raw sewage in certain output portions of sewage treatment facilities.
- Logging of incoming correspondence and coordination of research and responses.
- Automatic generation of memoranda on certain dates.
- Scheduling of meetings and appointments.
- Portable computer systems that remind individuals of appointments.
- Computerized instruction and training programs where employees work at their own pace with both printed materials and a computer terminal.

Microcomputers can be used in many of these applications.

In 1983 Clark County began installing microcomputers in several of its departments including the Manager's and Comptroller's Offices. A major benefit of using this equipment is that individuals can do their own computing and will not get locked into Data Processing's knowledge or turnaround time.

The payback from using microcomputers can be enormous. Some experts estimate that they increase professional productivity by 20 to 50 percent. Because of their low unit cost and user orientation, microequipment can be purchased and used at substantial savings. Particularly in large local governments, such as Clark County, microcomputers are being considered as a means of distributing information processing to ease the headaches of centralized data processing (e.g., the difficulties in juggling priorities, the long lead times needed to develop programs, etc.).

The introduction of microcomputing to the large local government not only directs itself to the immediate needs of users constrained by shrinking budgets but frees major data processing resources for the maintenance of the high priority systems directly impacting the citizenry. Within the large local government the microcomputer with flexible, generalized software can satisfy immediate user needs without costly programming efforts and without requiring additional resources on a machine more suited to large systems usage. It is important to remember that the uses for microcomputing are not separate and distinct from large systems by function. The two may complement each other.

## CONCLUSION: THE IMPACT OF COMPUTERS ON LOCAL GOVERNMENT

What impact is the computer having on local government operations and services? Originally, computers tended to be sold on the basis of staff displacements which would more than offset the capital costs of the equipment and the salaries of the staff. This led to the early target operations, such as property assessment roles, utility billing, payroll operations, and similar high-volume operations which require large clerical staffs to do routine work.

In recent years the emphasis, especially in more sophisticated city and county government offices has moved from staff displacement to stressing the extent to which computers can improve service delivery and managerial effectiveness. The reasons for this change are fairly obvious. It is doubtful that many cities and counties ever were able to prove that cost-cutting results more than offset the total costs of computerized operations. Some local governments have, however, made rather convincing arguments that in terms of cost avoidance they have done very well and that the budget would have increased much more than it did if the computer had not been in place.

Beyond the cost-juggling process, is the clear fact that when properly utilized, the computer provides for the development of information resources which lead to a much better understanding of community conditions, better allocation of resources, better managerial direction and control, and much more effective evaluation techniques. This is the direction in which computer utilization in Clark County is heading as evidenced by the innovative applications which have been discussed.

***References***

1. Anochie, O.M., & Smolin, H.J. Directory of Data Processing in Small Local Governments. Washington, D.C.: MIS Special Reports Series, International City Management Association, 1978.
2. Bizzel, J.E. "The County Benefits of EDP" *American County Government,* 31 (August 1966) pp. 8-11.
3. Bizzel, J.E. "EDP Personnel and Salaries" *American County Government,* 31 (October 1966) pp. 20-23.
4. Bizzel, J.E. "EDP Equipment and Rental" *American County Government,* 31 (October 1966) pp. 24-26.
5. Bizzel, J.E. "Control and Use of EDP Systems" *American County Government,* 32 (February 1977) pp. 20-23.
6. City of Las Vegas, "Proposal for Computer System Expansion and Upgrade." Department of Management Information Services Unpublished Survey, October 1979.
7. Colton, K.W. *Police and Computer Technology: Use, Implementation and Impact,* Lexington, Mass.: Lexington Books, 1978.
8. Cornett, W.F., Jr. "EDP and the Small City" Management Information Services Report, Vol. 2, No. S-5. Washington, D.C.: International City Management Association, May 1970.
9. Crecine, J.P. "A Computer Simulation Model of Municipal Budgeting" *Management Science,* 13 (July 1967) pp. 786-815.
10. Crecine. J.P. *Governmental Problem Solving: A Computer Simulation of Municipal Budgeting,* Chicago: Rand-McNally, 1969.
11. Dial, O.E., Kraemer, L., Mitchel, W.H., & Weiner, M.E. "Municipal Information Systems: The State-of-the-Art in 1970." Washington, D.C.: Dept. of Housing and Urban Development, 1970.
12. Downs, A. "A Realistic Look at the Final Payoffs from Urban Data Systems," *Public Administration Review,* Vol. 27, No. 5 (May/June 1967) pp. 204-210.
13. International City Management Association. "Municipal Applications of Electronic Data Processing Equipment" Management Information Service Report, No. 226. Chicago: International City Management Association, November 1962.
14. Kraemer, K.L., & Perry, J.L. "The Federal Push to Bring Computer Applications to Local Governments" *Public Administration Review,* Vol. 39, No. 3 (May/June 1979), pp. 260-270.
15. Kraemer, K.L., & Howe, G. "Automated Data Processing in Municipal Government: A Survey" The Municipal Year Book 1968. Washington, D.C.: International City Management Association, 1968, pp. 280-303.
16. Kraemer, K.L., Dutton, W.H., & Matthews, J.R. "Municipal Computers: Growth, Usage and Management" Urban Data Services Reports, Vol. 7, No. 11. Washington, D.C.: International City Management Association, November 1975.
17. Matthews, J.R., Dutton, W.H. & Kraemer, K.L. "County Computers: Growth Usage and Management" Urban Data Service Reports, Vol. 8, No. 2, Washington, D.C.: International City Management Association, February 1976.
18. Shaffer, R.A. "Computer Industry Is Finding That It's Vulnerable to Slump," *The Wall Street Journal,* April 16, 1983, p. 35.
19. Watlington, M. "A Survey of Municipal Automated Data Processing" Urban Data Service Reports, Vol. 2, No. 10. Washington, D.C.: International City Management Association, October 1970.
20. Willis, H.L. "The Status of ADP in City Government." The Municipal Year Book 1965. Chicago: International City Managers' Association, 1965, pp. 285-296.

---

***Footnotes:***

[1] For a description of the expectations and experiences of local governments with computers in the 1960's, see ICMA 1962; Willis, 1965; Bizzell, 1966, 1967; Downs, 1967; Crecine, 1967, 1969; Dial et al., 1970; Watlington, 1970; Cornett, 1970.

[2] Summaries of the survey results for cities are reported in Kraemer, Dutton, & Matthews, 1975. Summary data for counties is in Matthews, Dutton, & Kraemer, 1976.

[3] For an analysis of federal involvement in local government EDP, see Kraemer & Perry, 1979. In addition, a comprehensive discussion of the Law Enforcement Assistance Administration's support of local law enforcement automation may be found in Colton, 1978.

# Androgyny: The Key to Successfully Managing Today's Public Accounting Firms?

*By Rebekah Maupin**

*The author advances the hypothesis that psychologically "androgynous" accountants might be more likely to succeed in managerial positions than accountants who are sex-typed. An experiment with 276 public accountants provides support for this hypothesis. The experiment provides evidence that there exists a distinct class of accountants who can appropriately be termed "androgynous," whose sex-role adaptability enables them to engage in situationally effective behavior without regard for its stereotype as masculine or feminine. The majority of public accountants who are perceived by their employees to be effective managers have androgynous behavior patterns. Whereas, nonandrogynous individuals may have managerial deficits with respect to public accounting careers, with feminine females having perhaps the greatest deficit of all.*

Alice Sargent [10] proposes a definintion of management that draws on the best in all of us, both men and women. She calls it "androgyny," having the characteristics of both sexes. The key to the use of her term is balanced coexistence, male and female forces acting equally. Effective managers need to use both logic and intuition, recognize both facts and feelings, be both technically competent and emotionally caring.

The purpose of this article is to evaluate the validity of this proposal as it relates to public accountants. What are the behavioral consequences of sex-role stereotyping? Is there any sense in which the androgynous accountant is a better manager than the accountant who is sex-typed.

Although there is no previous research which bears on this hypothesis directly, a review of related literature supports the underlying assumption that a high level of sex-typing may be undesirable. For example, high femininity in females has consistently been correlated with high anxiety, low self-esteem, and low social acceptance; and, high masculinity in males has been correlated with high anxiety, high neuroticism, and low self-acceptance [3,4,6]. In addition, men and women who are more sex-typed have been found to have lower overall intelligence and job satisfaction. Greater intellectual development and leadership abilities have been correlated quite consistently with cross sex-typing, that is, with masculinity in women and femininity in men [2,5,7,8,9].

### The Research Study

This study investigates whether accountants who are perceived by their employees to be effective supervisors possess sex-role characteristics that differentiate them from accountants who are perceived to be unsatisfactory supervisors.

**Data Sources.** In order to obtain the data for this research project, a sample of 300 male and 300 female CPAs was selected from the 1982 AICPA directory. Information on employee satisfaction with supervisor in relation to the supervisor's sex-role behavior was obtained from the mailing of the Bem Sex-Role Inventory (BSRI) and the Supervision Component of the Job Descriptive Index (S-JDI) to the 600 individuals, with the following usable responses.

| | Number of Respondents | Sex of Supervisor | |
|---|---|---|---|
| | | Male | Female |
| Male respondents | 142 | 114 | 28 |
| Female respondents | 134 | 98 | 36 |
| Totals | 276 | 212 | 64 |

**Methodology and Results.** The supervisor's BSRI mean masculinity and mean femininity scores were the independent variables. They were used to predict the employee's S-JDI score, i.e., the measurement of employee satisfaction with supervisor in this research study. (The appendix of this paper contains an analysis of the BSRI and S-JDI instruments, how they were scored and a discussion of their validity.)

The hypothesis that a supervisor's masculinity and femininity scores can be used to predict an employee's S-JDI score was analyzed using multiple regression, and the resulting multiple correlation coefficient, $R^2$, was tested to determine if it differed from zero as indicated by the F-ratio. The results showed that the hypothesis could be accepted at a level of significance beyond .05, indicating that a supervisor's sex-role characteristics can be used to predict a subordinate's level of satisfaction with the supervisor. In the regression equation, the supervisor's femininity and masculinity scores were both significantly and positively correlated with the subordinate's S-JDI score.

The results obtained from the hypothesis testing tend to validate the original proposal. As previously noted, "andro-

---

**Rebekah Maupin is Assistant Professor of Accounting, University of Hawaii at Manoa, Honolulu, Hawaii.*

gynous" managers are characterized by both a high level of masculinity skills and a high level of femininity skills. This sex-role adaptability allows them to engage in situationally effective behavior which, in turn, tends to provide for more favorable manager-subordinate relations. Whereas, strongly sex-typed accountants appear to be seriously limited in their managerial effectiveness.

### Implications

This study may have implications for both controlling turnover and professional development in public accounting firms.

**Supervision as related to employee turnover.** To determine the effect of employee satisfaction with supervisor on turnover, the author reviewed nine research studies that investigated the relationship between supervisors and employees and turnover. All nine of these studies used the S-JDI score to measure employee satisfaction with supervisor. Eight of the studies found a significant inverse relationship between satisfaction with supervisory relations and turnover, while only one study did not find a significant relationship. Thus, the evidence supporting an inverse relationship between the S-JDI score and turnover appears to be strong.

Utilizing the S-JDI, the author's study showed that an employee's level of satisfaction with his supervisor is significantly influenced by the supervisor's sex-role behavior patterns. Specifically, the study suggests that an employee's level of satisfaction increases as a supervisor becomes more "androgynous." The assumption follows, therefore, that by increasing the level of androgyny skills among managers (thereby increasing employee satisfaction), public accounting firms may find a positive effect on employee turnover.

**Professional development.** As previously suggested, the so-called feminine or social skills — namely, a sensitivity to employee needs and alliance building — appear just as important as the masculine task-oriented skills — setting high standards for oneself and others — in managing today's workforce and controlling turnover. Traditionally, however, few accountants have received training in such management skills, in sharp contrast to the numerous sessions on technical training they undergo. Thus, accountants who become supervisors often find it difficult to manage a work group. The concept of androgyny helps to shed light on this issue.

The male accountant has traditionally been rewarded for his skills in task-oriented activity, living by rules and procedures, and his competitiveness. However, as we recognize the diversity of the needs of the new workforce and the importance of responding to these needs, male managers must now be encouraged to show greater concern for human factors. People skills, traditionally regarded as feminine, need to come to the fore as a crucial part of professional development in public accounting firms.

At the same time, many women accountants, who are now being promoted to supervisory positions in significant numbers, have been socialized to be more reactive than proactive, to moderate or sidestep conflict rather than to confront it head on, and refrain from expressing boundaries by saying "yes" when they should say "no." As a result, many of these women have a need to acquire certain task-oriented and assertiveness skills, the so-called masculine traits, in order to become effective managers.

In summary, because women and men have been socialized differently, both may be professionally deficient and can benefit from learning each other's skills. In addition to technical training, public accounting firms need to offer learning opportunities, ranging from women-in-management, to human resource management, to programs in men and women in organizations.

### Conclusion

The findings of this study may have particular significance to the management of turnover and professional development in public accounting firms. The results of the regression analysis procedures indicate that a supervisor's masculine, feminine, and androgynous behavior characteristics can be used to predict an employee's level of satisfaction with the supervisor. Taken as a whole, the study suggests that an employee's level of job satisfaction increases as his or her supervisor becomes more androgynous. This blend of male and female qualities — androgynous management — may be a key to effective supervisory relations and, in turn, to managing turnover within the public accounting profession. These notions offer support for public accounting firms to take a more proactive stance toward assessing the specific skills employees need, and then to design and deliver programs that take into account the manager-subordinate and natural work team relationships. All this requires effective masculine instrumental behavior as well as feminine expressive behavior.

### Appendix

**Bem Sex-Role Inventory.** The Bem Sex-Role Inventory (BSRI) includes a masculinity, femininity, and neutral scale,[1] each of which contains 20 personality characteristics. These characteristics are listed in Table 1. When taking the BSRI, a respondent was asked to indicate how well each of the personality characteristics describes his or her immediate supervisor. The scale ranges from 1 ("Never or almost never true") to 7 ("Always or almost always true"). The BSRI characterizes a supervisor as masculine, feminine, or androgynous as a function of the difference between his or her masculine and feminine personality characteristics. A supervisor was thus sex-typed, whether masculine or feminine, to the extent that this difference score was high, and androgynous, to the extent that this difference score was low. Androgyny refers to the situation in which a supervisor was both highly masculine and highly feminine.

The BSRI mean masculinity and mean femininity scores were the independent variables.[2] They were used to predict the score on the Supervision Component of the Job Descriptive Index (S-JDI).[3] The S-JDI is shown in Table 2.

## TABLE 1

### Items on the Masculinity, Femininity, and Neutral Scales of the BSRI

| Masculine Items | Feminine Items | Neutral Items |
|---|---|---|
| 49. Acts as leader | 11. Affectionate | 51. Adaptable |
| 46. Aggressive | 5. Cheerful | 36. Conceited |
| 58. Ambitious | 50. Childlike | 9. Conscientious |
| 22. Analytical | 52. Compassionate | 60. Conventional |
| 13. Assertive | 53. Does not use harsh language | 45. Friendly |
| 10. Athletic | 35. Eager to soothe hurt feelings | 15. Happy |
| 55. Competitive | 20. Feminine | 3. Helpful |
| 4. Defends own beliefs | 14. Flatterable | 48. Inefficient |
| 37. Dominant | 59. Gentle | 24. Jealous |
| 19. Forceful | 47. Gullible | 39. Likeable |
| 25. Has leadership abilities | 56. Loves children | 6. Moody |
| 7. Independent | 26. Sensitive to the needs of others | 21. Reliable |
| 52. Individualistic | 8. Shy | 30. Secretive |
| 31. Makes decisions easily | 38. Soft spoken | 33. Sincere |
| 40. Masculine | 23. Sympathetic | 42. Solemn |
| 1. Self-reliant | 44. Tender | 57. Tactful |
| 34. Self-sufficient | 29. Understanding | 12. Theatrical |
| 16. Strong personality | 42. Warm | 27. Truthful |
| 43. Willing to take a stand | 2. Yielding | 18. Unpredictable |
| 28. Willing to take risks | | 54. Unsympathetic |

Note: The number preceding each item reflects the position of each adjective as it actually appears on the inventory.

Source: Bem, "The measurement of psychological androgyny," *Journal of Consulting and Clinical Psychology,* 1974, 157.

## TABLE 2

### Supervision Component of Job Descriptive Index

In the instructions the subject was asked to put Y beside an item if the item described his or supervisor, N if the item did not describe the supervisor, or ? if he could not decide. The response shown beside each item is the one scored in the "satisfied" direction for each scale. If the subject answered Y to a Y question or N to an N question, he (she) received three points. If the subject answered N to a Y question or Y to an N question, he (she) received 0 points. If the subject answered ?, he (she) received one point, because Smith, et al. found an ? indicated slight dissatisfaction.

| | | | |
|---|---|---|---|
| Y | Asks my advice | Y | Tells me where I stand |
| N | Hard to please | N | Annoying |
| N | Impolite | N | Stubborn |
| Y | Praises good work | Y | Knows job well |
| Y | Tactful | N | Bad |
| Y | Influential | Y | Intelligent |
| Y | Up-to-date | Y | Leaves me on my own |
| N | Doesn't supervise enough | N | Lazy |
| N | Quick tempered | Y | Around when needed |

Source: Smith, Kendall and Hulin. *Job Descriptive Index,* 1969, Cornell University, p. 83.

*References*

1. Bem, S.L. The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology,* 1974, 42, 155-162.
2. Bem. S.L. "Bem Sex-Role Inventory," Department of Psychology, Stanford University, 1976.
3. Cosentino, F. & Heilbrun, A.B. "Anxiety correlates of sex-role identity in college students," *Psychological Reports,* 1964, 14, 729-730.
4. Gall, S.W. "Masculinity-femininity in relation to anxiety and social acceptance," *Journal of Clinical Psychology,* 1969, 267-289.
5. Graves, L.M. & Powell, G.M. "Sex differences in implicit theories of leadership," *Psychological Reports,* 1982, 50, 689-690.
6. Harford, T.C., Willis, C.H. & Deabler, H.L. "Personality correlates of masculinity-femininity," *Psychological Reports,* 1977, 881-884.
7. Inderlied, S.D. & Powell, G. "Sex-role identity and leadership style: Different labels for the same concept?" *Sex-Roles,* 1979, 5, 613-625.
8. Kavanagh, M. and Halpern, M. "The impact of job level and sex differences on the relationship between life and job satisfaction." *Academy of Management Journal,* 1977, 20(1), 66-73.
9. Maccoby, M. "Sex differences in intellectual functioning," *The Development of Sex Differences,"* Stanford University Press, 1966.
10. Sargent, A.G. "The Androgynous Manager," American Management Associations, AMACON, 1981.
11. Taylor, M.C. & Hall, J.A. "Psychological androgyny: Theories, methods and conclusions." *Psychological Bulletin,* 1982, 2, 347-366.

---

*Footnotes:*

[1] The validity of the BSRI in androgyny research has been extensively reviewed by Taylor and Hall (1982). They reported, (a) general support for the differential validity of the masculine (M) and feminine (F) scales, (b) convergent validity coefficients (i.e., M scale with male-typed measures and F scale with female-typed measures), and (c) highly similar results for men and women.

[2] The mean M score equals the total score on all 20 masculine characteristics divided by 20; the mean F score equals the total score on all feminine characteristics divided by 20.

[3] The wide adoption of the JDI by researchers, the extensive validation of the JDI by Smith, Kendall and Hulin, and the support of well-known job satisfaction researchers such as Porter, Steers and Vroom all point to the usefulness of the JDI as a measurement instrument for employee satisfaction.

# A Salary Survey of CPA Firms in the Reno/Sparks Area

*By B. J. Fuller**

The author surveyed CPA firms in the Reno-Sparks area to determine salary and "fringe" benefits for accountants. The need for the survey, conducted in Spring, 1984, was suggested by many requests for salary levels and "fringe" benefits data for local accounting firms.

Ten firms were included in the survey — all of the larger local CPA firms and a sample of the smaller ones. All of the firms, except one of the larger firms, responded to the questionnaire request for data.

Table 1 presents salaries for professional staff from entry

TABLE 1

**Base Salary for an Entry Level Professional Staff and the Base Salary for Currently Employed Professional Staff in Six-Month Intervals for Five Years Along with Other Salary Related Information**

| | Five Smaller Firms | | | | | Four Larger Firms | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 |
| **Entry Level** | | 12600 | | | 16000 | 17400 | 17700 | 16200 | 18000 |
| **Professional Staff with Work Experience of:** | | | | | | | | | |
| 6 months | | 13200 | | 16000 | 16000 | 17700 | | 17200 | |
| 12 | | 15000 | | | | 18000 | 19500 | 18200 | 19600 |
| 18 | | 16800 | | 18000 | | 18300 | | 19200 | |
| 24 | 20800 | | 22000 | | | 19200 | 20100 | 20200 | 20500 |
| 30 | | | | | | 21600 | | 21200 | |
| 36 | | | | | 20700 | 24000 | 23000 | 24200 | 21500 |
| 42 | | | | | | 24600 | | 26200 | |
| 48 | | | 28800 | | 20100 | 25200 | 27000 | 28200 | 27000 |
| 54 | | | | | 30600 | 25800 | | 30200 | |
| 60 | 30000 | | 36000 | 29000 | 30600 | 27000 | 30000 | 32200 | 32000 |
| **How Often Reviewed** | semi-annually | semi-annually | annually | annually | annually | annually | annually | annually | annually |
| **Date of Last Review** | Nov 1983 | Dec 1983 | June 1983 | employee anniv. date | July 1983 | Oct 1983 | May 1983 | Jan 1984 | July 1983 |
| **Pay Premium for - If Yes, Annual Dollar Amount Given in Parenthesis - Staff in Area of:** | | | | | | | | | |
| MBA's | NO | NO | NO | NO | NO | NO | YES($1200) | NO | NO |
| TAX | YES ($3000-5000) | NO | NO | NO | NO | NO | YES($2400) | NO | NO |
| Management Advisory Svc. | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| **Comp Time Policy - If Yes, Is Comp Time Policy:** | YES | NO | YES | YES | YES | YES | YES | YES | YES |
| Mandatory | | | ✓ | | | | | ✓ | |
| Discretion of Firm | | | | | | | | | ✓ mutual agreement |
| Discretion of Employee | ✓ | | | ✓ | ✓ | ✓ | ✓ | | ✓ |

---

*B.J. Fuller is Associate Professor of Accounting and Information Systems, College of Business Administration, University of Nevada, Reno.*

level to five years of experience.

Paid holidays ranged from six to ten days with six of the nine firms reporting eight days.

Two of the smaller firms paid a premium for overtime; two did not and one paid a premium sometimes. One of the larger firms paid a premium for overtime.

Table 2 presents fringe benefits along with selected information of specific benefits of the nine firms. Only two of the larger firms included dental as part of their health insurance plan and none of the firms included optical benefits. Professional dues paid by the firms generally included state society and AICPA membership dues. All of the larger firms and two of the smaller firms paid other selected civic and professional organization dues for which the professional staff were members.

Additional data derived from the survey will be provided by the author on request.

TABLE 2

**Fringe Benefits Along With a Breakdown of a Few Specific Benefits the Base Salary**

| | Five Smaller Firms | | | | | Four Larger Firms | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 |
| **Fringe Benefits Paid (Full or Part)** | | | | | | | | | |
| Health Insurance | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Life Insurance | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Profit Sharing Plan | | | | | ✓ | ✓ | ✓ | | |
| Retirement Plan | | | | | ✓ | | | ✓ | |
| College Tuition | | ✓ | ✓ | | ✓ | | | | ✓ |
| Professional Organization Dues | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Health Insurance Premiums Paid for** | | | | | | | | | |
| Employee - % | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 73 | 100 |
| Employee Dependent - % | -0- | -0 | 100 | 80 | -0- | 50 | -0- | 43 | -0- |
| **Health Insurance - Deductible** | | | | | | | | | |
| Basic | ($1,000 | | | ✓ | 100 | | 100 | | 250 |
| Major Medical | for both) | 500 | 250 | | 100 | ✓ | 100 | 100 | 2500 |
| Dental | | | | | | | 100 | 50 | |
| **Life Insurance** | | | | | | | | | |
| Coverage in Dollars or Number of Times Salary | 5000 | AICPA Schedule | | | 30000 | Based on Salary | 1½ Times Salary | $20,000 | 1 Time Salary |
| Premium Paid by Firm - % | 100 | 100 | | 100 | 100 | 100 | 100 | 50 | 100 |
| **Profit Sharing and/or Retirement Plans** | | | | | | | | | |
| Contribution by Firm Dollar Amount and/or Percent of Salary | | | | | 25% | ✓ | 3% | ✓ | |
| **Time Necessary to Become Eligible** | | | | | One Year | 1000 Hours Annually | Three Years | | |

✓ indicates that the benefit is provided.

# Strategies for the Nevada Businessman After the Deficit Reduction Act of 1984

*By Robert E. Blatz, Jr. and John M. Strefeler**

The Deficit Reduction Act of 1984[1] is the third in a series of tax reform measures which occurred during the first term of the Reagan Presidency. This reform movement began in 1981 with the passage of the Economic Recovery Tax Act[2] which was followed in 1982 by the Tax Equity and Fiscal Responsibility Act.[3] The nation was allowed to "catch its breath" in 1983, but this brief respite should be viewed as merely the "calm before the storm."

The DRA of 1984 is not only the most far reaching of the aforementioned reform measures, but is is also the most subtle of the three. This article seeks to guide the Nevada businessman through this latest tax reform effort. It will identify and briefly analyze those provisions of the DRA of 1984 which most dramatically affect the individual businessman. Four major areas will be explored: 1) Changes Affecting Employees, 2) General Business Changes, 3) Changes in Tax Accounting Procedures, 4) General Investment Changes.

### The DRA and the Individual: Changes Affecting Employees

**Fringe Benefits [Sec. 132 (effective generally January 1, 1985)].** The moratorium on the non-taxability of many employee fringe benefits has been lifted. Under new Section 132 only certain classes of fringe benefits will qualify as nontaxable. All other types of fringe benefits will be taxable to the employee. These nontaxable classes include: (1) no additional cost fringes, (2) qualified employee discount fringes, (3) working condition fringes, (4) de minimis fringes, (5) employee parking, (6) on-premise recreation and athletic facilities, (7) auto salesman's demonstrator, (8) subsidized eating facilities. An employee who receives any of these listed fringe benefits should not have to include the fair market value of such benefits in his gross income for the tax year. These benefits generally must be noncash in nature and must not be meted out in a discriminatory fashion. (i.e. favor only highly compensated employees).

The "no additional cost fringe" relates to employer-provided *services* such as airline seats or low-cost telephone services. To qualify the service must be the same as the service the employer offers to the public in his ordinary course of business and the employer must not incur substantial additional costs in providing this service to his employees. This type of fringe benefit may also be given to the spouse and dependents of the employee.

"Qualified employee discounts" are subject to certain limitations depending on whether the discount relates to goods or services. The excludable discount cannot exceed the selling price of an item times the employer's gross-profit percentage. In the case of a service discount, the exclusion will be limited to 20% of the price at which the employer offers the service to the public in the ordinary course of his business.

A "working condition fringe" would include such things as employer provided body guards, business periodicals, etc. To qualify the goods or services provided to the employee must be of a type that the employee could have deducted as a miscellaneous employee business expense had he actually paid for them himself. This benefit is free from the general nondiscriminatory rule.

"De minimis fringes" include small employer provided items which would be commonly provided by employers to their employees. Examples would be company picnics or Christmas parties, on-premises coffee and doughnuts. Basically, the service or good must be so small that accounting for it would be unreasonable or administratively impracticable.

"On-premise recreation and athletic facilities" would include the use of gyms, pools, saunas, tennis courts, or golf courses. The use of these items by employee dependents and spouses is also permissable. The use of these facilities, however, must be nondiscriminatory.

As is quite evident, many commonly provided fringe benefits will not be included within the purview of Sec. 132. These nonqualifying fringe benefits must be included in the gross income of the recipient employee at their fair market value. Furthermore, the value of such fringe benefits is also subject to income tax withholding, the FICA tax and the FUTA tax. Lastly, the employer may deduct the cost of both includable and excludable fringe benefits, provided that they meet the "ordinary and necessary" business deduction tests of Sec. 162.

**Cafeteria Plans [Sec. 125 (effective January 1, 1985)].** Prior law permitted covered employees to choose between taxable and nontaxable fringe benefits. The fact that one option (e.g. cash) was taxable would not in and of itself make another option (e.g. noncash fringe benefit) taxable.

---

**Robert E. Blatz, Jr. and John M. Strefeler are Associate Professors of Accounting and Information Systems, College of Business Administration, University of Nevada, Reno.*

Under DRA changes, only cash or *statutory fringe benefits* (i.e. Sec. 125 et al) may be offered under the plan and if, during a plan year, more than 25 percent of the total nontaxable benefits under the cafeteria plan are provided to key employees, the key employees will be taxed as though they received *all taxable benefits* under the plan. The new law also requires the employer to maintain records and report the nature of such cafeteria plan benefits.

**Interest-Free Loans to Employees [Sec 7872 (effective June 6, 1984)].** Prior law permitted interest free loans to employees. Interest was not imputed; thus, there would be no adverse tax consequences to either the employer or the employee. The new law imputes interest in such situations. This results in interest income to the employer and interest expense to the employee. Since the employer is deemed to waive his right to such an interest payment he will not be taxed but the waiver will result in conpensation being imputed to the employee. The interest to be imputed is tied to the average market yields on U.S. Treasury Instruments of similar maturities. Employer loans to help employee relocation and loans of $10,000 or less are exempted from this rule.

**Business Use of Luxury Automobiles and the Mixed Use (Personal and Business) of Automobiles and Other Assets [Sec. 280F (effective June 19, 1984) and Sec. 274(d) (effective January 1, 1985)].** Tax reform in this area is aimed directly at the use of luxury automobiles. Section 280F(a) limits the amount of investment tax credit allocable to passenger automobiles to $1,000 and it limits the first year ACRS recovery deduction with respect to such automobiles to $4,000 in the first year and to $6,000 for each year thereafter. Any depreciable basis remaining after the normal three-year recovery period will be recovered at a maximum rate of $6,000 per year. These limitations will basically affect automobiles costing $16,000 or more.

Section 280F(b) reduces the tax benefits growing out of the ownership of certain kinds of property which are used for both personal and business purposes. This section takes deadly aim at basically three types of "listed property": automobiles, computers, and recreational or amusement type property. This list should not be regarded as exclusive. If such "listed property" is not used for business purposes more than 50 percent of the time, the investment tax credit will be lost. Furthermore, the ACRS straight-line recovery method must be used over an extended recovery period. For three-year property, the minimum recovery period will be five years; for five-year property, it will be twelve years, for real estate, it will be thirty-five years. "Business use" is defined as use only in connection with the taxpayer's "trade or business"; it does *not* include use in other "income-producing activities" such as investment. The allocation formula to determine business vs. personal use is not limited to only mileage if different factors, such as time, may be more appropriate. Lastly, if the "listed property" is owned by an "employee" and used by him in connection with his employment, it must be for the "convenience of the employer" and it must also be a "condition of his employment."

The biggest problem in the area of mixed-use property stems from the Sec. 274(d) record-keeping requirements. Recently, these rules were relaxed (January, 1985). However, extensive records will be required to support deductions in this area. In other words, adequate contemporaneous records must be kept which establish:

1. The amount of the deduction or credit
2. The time and place of the business use
3. The persons using the property, and
4. The business relationship to the taxpayer of the persons using the property.

A five percent penalty will be assessed to tax increases resulting from the disallowance of deductions or credits due to taxpayer failure to comply with these record-keeping requirements.

### The DRA and the Individual: General Business Changes

**ACRS and Election to Expense Assets [Sec. 168 (effective March 15, 1984) and Sec. 179 (b) (1)].** The 15 year ACRS recovery period for real property used in a trade or business or held for investment has been increased from 15 to 18 years. This change, however, does not apply to low income housing. The Sec. 179 first-year expensing limitation, which was to be increased to $7,500 for tax years beginning in 1984 will remain at $5,000 until 1988 when it is scheduled to be increased to $7,500 ($10,000 for 1990).

**Gain on Sales of Sec. 1231 Assets [Secs. 1231 (a) and (c), 6411, 6511 (effective January 1, 1985)].** The DRA mandates a five-year "lookback" in netting Sec. 1231 gains or losses. This change will cause gain to be treated as ordinary gain, rather than capital gain, to the extent of losses recognized in like transactions for the five most recent years after 1981. Example:

> In late 1985 TP receives an offer to purchase a Sec. 1231 asset which would result in a $40,000 gain. Assume TP had suffered a $30,000 loss on the sale of a Sec. 1231 asset in early 1985. Under the old Sec. 1231 rules TP should wait until 1986 to complete the sale. This would allow the full use of the $30,000 loss (ordinary loss) in 1985 and the 1986 $40,000 gain would be treated as a capital gain. Under the new rules $30,000 of this gain would be considered ordinary gain.

**Investment Tax Credit Limitation [Sec. 48 (c) (2) (a)].** The maximum amount of "used" property that will presently qualify for the ITC is $125,000. The scheduled increase to $150,000 (1985 and after) has been postponed to 1988.

**Targeted Jobs Credit [Secs. 51 (b) and (c) (3)].** This credit has been extended to include the 1985 tax year. It was scheduled to expire December 1, 1984.

**Depreciation Recapture in Connection with Installment Sales [Sec. 453 (i) (effective June 7, 1984)].** This change requires the immediate, full recognition of Sec. 1245 and Sec. 1250 recapture in the year of sale although no payments may actually be received during such year.
Example:

> On January 1, 1985, TP sells an asset for $50,000 having a basis of $30,000. Assume that $10,000 of the gain represents Sec. 1245 recapture. The installment agreement calls for four equal payments of $12,500, to commence on January 1, 1986.

The new law requires TP to recognize $10,000 of ordinary income in 1985, whereas under the old law TP would have recognized only $5,000 in 1986. [$20,000 (gain)/$50,000 (agreement price) x $12,500 (cash collected)].

**Finance Lease Provision Postponed [Secs. 168 (f) (8) (B) (ii) (I) and 168 (i) (4)].** Certain provisions of TEFRA of 1982 created a special tax-based lease aptly labeled a "Finance Lease." These TEFRA provisions liberalized existing rules for determining whether a transaction would be considered a "true lease" or a "conditional sale" for tax purposes. The most important of these provisions related to leases of limited use property and leases containing fixed-price purchase options. The new law postpones the effective date of these "Finance Leases" to 1987. This postponement is retroactive to January 1, 1984.

**Limitations on Open-Ended Like-Kind Exchanges [Sec. 1031 (a) (3) (effective July 19, 1984)].** Under prior law, nonsimultaneous like-kind exchanges could qualify under the gain nonrecognition rules of Sec. 1031. In fact, one court case allowed the TP as much as five years to designate the asset he was to receive from the other party. Under the new rules TP must identify the asset he is to receive within 45 days of the transfer of his asset to the other party. Additionally, he must receive such identified asset within 180 days of this transfer, but not later than the filing date (including extensions) of his return for the year in which his asset was transferred to the other party.

## The DRA and Changes in Tax Accounting Procedures

**Accounting for Expenses Between Related Parties [Sec. 267 (a), (e) and (f) (effective January 1, 1984)].** The "two and a half month rule" of Sec. 267 was eliminated and the definition of related parties was expanded to include (a) partners and their partnerships, (b) S corporation shareholders and S corporations[4], (c) partnerships or S corporations and regular corporations controlled by the same parties, and (d) corporations that are members of the same controlled group. Under old Sec. 267 an accrual basis TP could accrue a deduction for the current tax year for expenses owed (but not paid) to a cash basis related party TP if it paid those expenses within the first two and a half months of its next tax year. Under the new law it cannot accrue the deduction until the tax year it actually pays the expense. This is not all bad in view of the fact that the accrual basis TP would have lost the deduction altogether if he did not pay the expense during the current tax year or the first two and a half months of the following tax year.

**Recovery of Tax Benefit Items [Sec. 111 (effective January 1, 1984)].** Under prior rules if a TP recovered a previously taken deduction he was required to include it in gross income for the year of recovery. This inclusion was required only to the extent the deduction actually produced a tax benefit (i.e. reduced income). Under the new law the recovery will be excludable only to the extent that it did *not* produce a tax benefit (i.e. reduced income).
Example:

In 1983 TP, a single individual, had itemized deductions of $2,800 of which $800 went for medical expenses. In 1984 he receives a $400 reimbursement for those expenses. Note that only $500 of this $800 reduced income in 1983. This is because the zero bracket amount reduced income $2,300. Under the old law TP was deemed to first recover the amount of deduction which *did not* reduce taxable income in 1983 (i.e. $300). This would lead to an inclusion of only $100 in 1984 ($400-$300). Under the new law TP is deemed to first recover the amount of deduction which *did* reduce taxable income in 1983 ($500). This would lead to an inclusion of the whole $400 in 1984.

**Capitalization of Start-Up and Pre-Opening Costs [Sec. 195 (effective July 1, 1984)].** Start-up costs are costs (1) incurred in creating or investigating the creation or acquisition of an active trade or business, or (2) incurred in any activity engaged in for profit, *before* the active trade or business begins, in anticipation of the activity becoming an active trade or business. These would include pre-opening costs which, if incurred in the operation of an existing active trade or business, would be allowable as a deduction in the year realized. The new law clarifies gray areas relating to the capitalization of such costs. The TP may elect to amortize these costs over a period of not less than 60 months. The deadline for such an election is the deadline for filing the return for the taxable year in which the trade or business begins (including extensions).

**Prepaid Expenses of Certain Cash Basis Tax Shelters [Sec. 461 (i) (effective April 1, 1984)].** This change applies to most cash basis tax shelters, including farming and ranching. Essentially deductions will be postponed until two tests have been met: (1) the expense has been paid, and (2) economic performance has occurred. Note that both the payment and economic performance must occur with the same tax year. However, economic performance which occurs within 90 days after the close of the tax year in which the payment ~~was made~~ will be treated as occurring in the tax year that the payment was made.

**Deferred Rental Payments of Cash Basis Taxpayers [Sec. 467 (effective June 9, 1984)].** This new section requires both lessor and lessee to report income and expense items using the accrual method of accounting if the rental payment is either a lump sum payment at the end of the lease term (applies only to leases in excess of two years) or if the rents are uneven (small in early years, large in later years). This section can be ignored provided the parties can show a legitimate business purpose. This section does, however, contain a presumptive tax-avoidance test which must be overcome by the parties. This section generally applies to the rental of tangible personal property when aggregate rental payments exceed $250,000 for the lease term.

**Mine Closing and Reclamation Costs [Sec. 468 (effective July 19, 1984)].** Prior to the DRA, mining companies could utilize different methods to account for closing and reclamation costs. The new law now requires economic performance, before such costs can be deducted. TP may, however, elect to adopt a uniform allowance method for handling such costs, if they are incurred in meeting federal or state requirements. To qualify, TP must elect and establish separate allowance accounts for these costs which will be treated as sinking funds. Additions to these accounts are to be calculated in accordance with a procedure utilizing the federal short term interest rate. Additional deductions will also be allowed for costs in excess of this reserve-deduction in the tax year that economic performance occurs.

**Premature Deductions by Accrual Basis Taxpayers [Sec. 461 (h) (effective July 19, 1984)].** Under prior law, an accrual basis TP could deduct an expense when the "all events test" was met (i.e. transaction occurred evidencing the existence of a liability and the amount of said liability could be calculated with reasonable accuracy). In other words, an accrual basis TP could obtain a deduction prior to the occurence of actual economic performance. The new law requires actual economic performance before an accrued expense deduction will be allowed.

The new law excepts certain recurring expense items from the economic performance test if they meet all of the following criteria:

1) the accrued item is either immaterial or accruing it results in a better matching of expenses against revenue,
2) the accrued item is recurring in nature and is treated consistently by the TP from tax year to tax year,
3) the all events test is met, and
4) economic performance occurs within a reasonable time (but not later than eight and a half months) after the close of the tax year in which the item was accrued.

Furthermore, the new law does not affect those items for which specific code sections already apply timing rules: for example, bad debt expense.

**Premature Deductions of Vacation Pay by Accrual Basis Taxpayers [Sec. 463 (effective July 19, 1984)].** Under prior law an accrual basis TP could accrue all vacation pay liabilities arising during the tax year regardless of the fact that it might not actually pay these expenses during the current or immediately succeeding tax year. The new law limits such accruals to an amount reasonably expected to be paid during the current or immediately succeeding tax year. A transition rule allows a TP, who accrued such deductions under prior rules, to preserve such deductions with respect to "vested accrued vacation pay."

### The DRA and the Individual: General Investment Changes

**Reduced Holding Period for Long Term Capital Gains [Sec. 1222 (effective June 23, 1984)].** The most dramatic change in the investment area was the reinstatement of the six month holding period for long-term capital gain treatment. Since the Tax Reform Act of 1976 this holding period has been one year. The new six month holding period applies to assets acquired after June 22, 1984 and before January 1, 1988. No doubt Congress will review this 1988 sunset to determine whether or not it should be extended.

**Net Interest Exclusion Repealed [Sec. 128].** Beginning in 1985, Section 128 would have permitted individual taxpayers to exclude 15% of net interest income received up to a maximum of $3,000 ($6,000 for a joint return). This section was repealed by DRA.

**Interest Expense to Carry Tax Exempt Income Producing Property [Sec. 7701(f) (effective July 19, 1984)].** This new section empowers the Treasury Department to promulgate regulations to prevent the circumvention of Sec. 265(2) (i.e. disallows deduction for interest expense incurred in carrying tax exempt investments) and other such code provisions through the use of intermediaries or related third parties.

**Original Issue Discount Rules Recodified and Extended [Secs. 1271 through 1275 (effective January 1, 1985)].** The Original Issue Discount (OID) Rules have been re-codified into new Secs. 1271 through 1275. OID is the excess of a bond, note, or other-debt instrument's stated redemption price at maturity over its "issue price." This discount is a substitute for interest and must be treated as such by both the holder and the issuer. The deduction by the issuer and the interest income of the holder is to be determined utilizing the *effective interest method* as opposed to the straight line method of amortizing the discount. New Sec. 1272 mandates this amortization method which is basically a restatement of former law. Sec. 1272 goes further, however, by substantially enlarging the definition of those debt instruments covered by the OID rules. Now debt instruments issued by individuals, issued for services, issued for the use of property, or privately-placed will be subject to the OID rules. Specifically excluded are tax-exempt debt instruments, U.S. Savings Bonds, short-term debt instruments (maturity date does not exceed one year), small loans (not to exceed $10,000) between two individuals if the loan is not connected with the trade or business of the lender and no tax avoidance purpose exists for the loan. New Sec. 1271, which defines debt retirements as "exchanges," and new Sec. 1273, which sets forth the mechanics of calculating the OID, remain unchanged versions of prior law.

The OID Rules have also been extended to the holders of discounted tax-exempt debt instruments. The adjusted basis for calculating gain or loss on disposal of such instruments is to be increased by the amount of the accrued OID. The *effective interest method* must be used to determine this accrual, which continues to be tax-exempt interest [Sec. 1288 (effective for obligations issued after September 3, 1982 and acquired after March 1, 1984)].

**Original Issue Discount and Sales of Non-Cash Assets [Sec. 1274 (effective July 1, 1985)].** One of the most significant changes in the area OID is the extension of the OID rules to nontraded debt instruments issued for nontraded, noncash assets. Prior law precluded OID rules in situations where a debt instrument was issued for noncash assets unless the debt instrument itself was publicly traded or had been issued in return for stock or securities which were themselves publicly traded in an established market. Basically Sec. 1274 provides that in any sale of noncash assets involving the use of nontraded debt instruments, the adequacy the annual stated interest is to be tested against a "test rate" of interest. This "test rate" is equal to 110% of the average yield on federal debt instruments of the same maturity. If the stated annual interest rate falls below the "test rate," the OID must be calculated utilizing an imputed interest rate equal to 120% of the averge yield on federal debt instruments of the same maturity. The excess of the value utilizing 120% rate over the value using the stated rate represents OID which must be accounted for by the issuer and holder under the *effective interest method* of amortization. Sec. 1274 exempts certain transactions from its scope. Most notable of which are: (1) sales of principal residences, (2) sales involving total payments not greater than $250,000, (3) sales of farms for less than $1 million by individuals, small business corporations [per Sec. 1244 (c) (3)] or partnerships whose capital accounts do not exceed the limits set forth in Sec. 1244 (c) (3). In short, this new section will cover most large sales of noncash assets where the consideration received consists of debt instruments issued by the purchaser.

Example:

> TP acquires a five year debt instrument in a sale of a Sec. 1274 asset. This instrument has a face amount of $1,000 and a stated interest rate of five percent compounded semi-annually at the end of the year. Assume that the Federal rate was 10% on the date of sale. First the debt instrument must be "tested" to determine whether the OID rules apply. Here they do because the stated rate (5%) is less than 110% of the Federal rate (10% x 110% = 11%). Next the OID amount must be calculated using a discount rate equal to 120% of the Federal rate. The present value of the debt instrument discounted at 12% (10% x 120% = 12%) is $737. Thus the OID will be $263 ($1,000 - $737). This OID must be accrued annually by holder and issuer using the effective interest method.

**Market Discount on Debt Instruments Treated as Taxable Interest [Secs. 1276 through 1278 (effective July 19, 1984)].** The OID rules apply only to those debt instruments "issued" at a discount. But what about those situations where debt instruments are acquired at a discount in a secondary market transaction? Under prior law an investor could acquire a "deep discount bond" and realize significant gains by holding it to maturity. If such a bond were held over one year, the gain would receive long-term capital gain treatment. New Secs. 1276 through 1278 make significant changes in this area. These sections require the gain on the sale or other disposition of a debt instrument with market discount be reported as ordinary interest income to the extent of any accrued market discount. Market discount is defined as the excess of the stated redemption price over the TP's basis in the debt instrument immediately after the acquisition. Market discount is then accrued on a *straight-line* basis (Market discount/days to maturity). However, the holder may elect to accrue this market discount utilizing the effective interest method. This election is available on an instrument-by-instrument basis. The holder may also elect to recognize this accrued market discount as income in the year accrued. If this election is not made, income recognition will be deferred until the debt instrument is sold or otherwise disposed of. These market discount rules do not apply to: (1) U.S. Savings Bonds, (2) tax-exempt obligations, (3) short-term debt instruments (maturity date does not exceed one year from date of issue), (4) demand debt (Regulations to be promulgated).

Example:

> TP buys a $10,000 bond for $8,000. Assume the bond has 20 years to maturity and that TP sells it for $9,200 after holding it five years. Ordinary interest income would be $500 (Mkt. Discount of $2,000 x 5 years / 20 years) and long-term capital gain $700 (gain $1,200 - interest $500). If TP had elected to recognize the income annually then the gain would have been $700 long-term gain. Sales price $9,200 - (cost $8,000 + accrued interest recognized annually $100 x 5).

Often an investor will borrow funds to acquire market discount debt instruments. Under prior law he could deduct this interest expense in full. New Sec. 1277 limits this deduction. Specifically, interest expense to carry market discount debt instruments will be deductible in the current year only to the extent it *exceeds* interest income (including accrued market discount) for the current year. The disallowed deduction is deferred until the taxable year in which the TP disposes of the market discount debt instrument. This deferral requirement does not apply in those cases where the TP elected to recognize the accrued market discount as income in the current tax year.

Example:

> TP has interest expense of $2,000 on a loan incurred in connection with the purchase of a market discount bond. Assume that he receives $1,600 bond interest. His net interest expense would be $400. If he had accrued market discount for the year of $100 then his net interest expense deduction would be limited to $300. If TP had elected to include the $100 of accrued market discount in GI for the year, the interest expense deduction would be $2,000 (but remember $1,700 would also have been taken into income for the year).

Finally, it should be remembered that a debt instrument can be subject to *both* the OID rules of Secs. 1271 through 1275 and the MD rules of Secs. 1276 through 1278. The interplay between these two sets of rules can provide interesting consequences as well as complicated calculations.

**Short Term Debt Instruments Issued at a Discount [Secs. 1281 through 1283 (effective July 19, 1984)].** These sections require accrual basis taxpayers, as well as certain other taxpayers, to accrue and include in income for the current tax year the acquisition discount "AD" (in the case of government debt instruments) and the OID (in the case of nongovernment debt instruments). Short-term is defined to be a maturity date of one year or less from the date of issue. Cash basis taxpayers can defer income recognition till actual receipt. Sec. 1282, however, restricts the interest expense deductions of cash basis taxpayers to only those amounts that exceed the accrued AD or accrued OID. Cash basis taxpayers may elect, however, to accrue the AD or OID and thereby avail themselves to a full interest expense deduction. Apparently, these rules do not apply where nongovernmental short-term obligations are purchased on the secondary market at a discount (i.e. short-term market discount).

**Stock and Stock Option Tax Straddles [Secs. 1092 and 263(g) (effective generally to positions established after 1983)].** The "tax straddle" rules of Sec. 1092 have been expanded to include offsetting positions in stock and stock options. Prior law generally restricted these "straddle" rules to actively traded personal property *other than stock*. Straddle transactions allow a taxpayer to immediately recognize a loss while deferring an equal amount of gain. For example, suppose that during the current tax year TP writes a $500 call option to sell 10 shares of stock which he had purchased some years ago for $150. Further suppose that between the date of the option and the end of the current tax year the price of the stock increases to $700. TP can avoid selling his shares and also recognize a $200 loss by either repurchasing the call option or purchasing an identical call option for $700. This $200 tax loss does not result in a corresponding economic loss since TP still owns the stock which has increased in value by $200. This economic gain will not be recognized for tax purposes, however, until the stock is sold. Under the new law this $200 loss will be postponed until the stock is sold. Broad exceptions exist, however. The rule does not apply to options written by option dealers in the course of their trade or business nor does it apply to options written by other taxpayers (nondealers) relating to stock held by them if (1) that covered call has a term of more than 30 days and (2) the call option is not "deep in the money." An option is considered "deep in the money" if its exercise price (i.e. strike price) is less than the "lowest qualified benchmark." This "benchmark" is determined by comparing the trading price of the stock at the time the call was written to the strike price. Sec. 263, which is related to this topic, requires the capitalization of interest and carrying charges allocable to straddles in those situations where losses must be deferred.

**Expanded Mark-to-Market Rules for Futures Contracts [Sec. 1256 (effective for positions established after July 18, 1984)].** Prior tax law required the annual reporting of gain or loss from "regulated futures contracts" utilizing a "mark-to-market" method of realization. Gains or losses were then treated as 60% long-term and 40% short-term capital gain regardless of the holding period. The new law expands these rules to all listed nonequity type options and to all dealer equity options whether held by option dealers or other taxpayers.

**Wash Sale Rules Expanded [Sec. 109] (effective July 19, 1984)].** The wash sale rules will now apply to realized losses on the closing of a short position of stock or securities in those instances where the TP, within 30 days after or before the closing either sells or sells short substantially identical stock or securities. The loss will be deferred until the entire transaction is closed. Wash sales of securities dealers in their ordinary course of business are exempt from the wash sales rules after 1984.

**Tax Shelter Reporting Rules [Secs. 6111 and 6707 (effective September 1, 1984)].** In addition to the various tax accounting provisions regulating the timing of tax shelter deductions, (see this paper: The DRA and Changes in Tax Accounting Procedures), the new act sets forth stringent reporting requirements and penalties for not meeting them. Starting September 1, 1984 tax shelters must be registered before they can be sold. For these purposes any investment which meets the following two criteria will be considered a tax shelter: (1) the investment is such that a person could reasonably infer that the representations made in connection with the sale of a shelter investment indicate a tax shelter ratio greater than 2:1 for any of the first five years ending after the date the shelter investment was offered for sale. (This ratio compares the shelter's gross deductions plus 200% of its gross credits to the investor's investment base); and (2) the investment is either A) required to be registered under Federal or state securities laws, B) sold under an exemption from such securities laws, or C) a substantial investment (i.e. the value of total expected tax shelter investments exceeds $250,000 and over four participants are expected).

Failure to timely register a tax shelter will subject the promoter to a penalty of no less than $500 and possibly as much as 1% of the total tax shelter investment to a ceiling limit of $10,000. In cases of intentional failure to file, the $10,000 ceiling limit is waived. New Form 8264 should be used in registering the tax shelter. The promoter must also maintain a list of all investors, which is open to IRS scrutiny. He must provide each investor with the shelter's registration number. Failure to provide this registration number will result in $100 penalty per investor. Finally, each investor must file a new form 8271 with his or her tax return for each year he or she remains in the tax shelter. This form sets forth the tax shelter's registration number. Failure to file this form will result in the IRS assessing a $50 penalty. If this failure to file is willful the IRS could invoke other penalties. It should also be noted that the penalty for promoting abusive tax shelters has been increased to the greater of $1,000 or 20% of the tax shelter's gross income [Secs. 6700 and 7408 (effective July 19, 1984)].

## Conclusion

The changes initiated by the DRA of 1984 were the result of stop-gap legislation to aid in the deficit reduction process. This act merely forestalled fundamental tax reform which is looming high on both the President's and the Congress' agendas.

---

*End notes:*

1. Pub. L. No. 98-369 (7/18/84) ("DRA").
2. Pub. L. No. 97-34, 95 Stat. 172 (1981) ("ERTA").
3. Pub. L. No. 97-248, 96 Stat. 324 (1982) ("TEFRA").
4. An S corporation is a tax-option corporation that is basically taxed as if it were a partnership.

# A Reexamination of the Relationship Between the Marginal Cost of Capital and Capital Budget Size

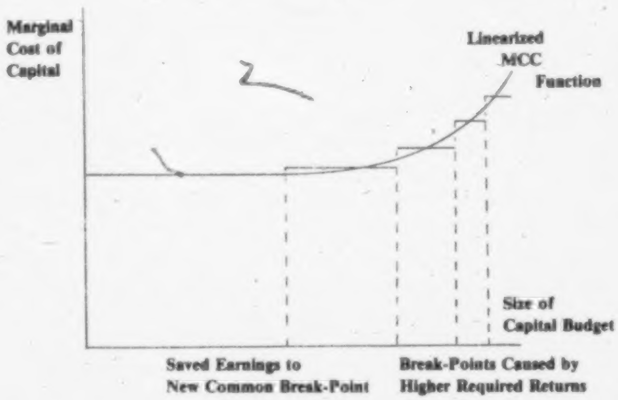
*By Frederick C. Scherr**

*This paper addresses the relationship between the firm's marginal cost of capital (capital structure held constant) and the size of the firm's financed capital budget. Many texts allege a positively sloped relationship based on increased required returns for investors (the price pressure hypothesis) and the flotation costs on new equity. The author argues that modern financial research does not support the price pressure hypothesis. The materiality of the increment in the cost of capital due to the flotation costs of new equity depends on the size of this increment relative to the additional costs that shareholders bear due to the fluctuating dividend stream resulting from using this discontinuity as a basis for dividend decisions. The size of this increment for a sample of publicly traded firms was calculated. The writer concludes that, given the existence of dividend clienteles and transaction costs in trading securities, it is probably in shareholders' interests to ignore this discontinuity in making dividend decisions. He thus found that for practical purposes, the function is nonsloping for large firms. This is in line with perceptions reported in survey results of managers of such firms.*

Financial theory and business practice seem to be in conflict with regard to the relationship between the firm's marginal cost of capital (MCC) and the amount the firm spends on capital projects. The standard approach of several textbooks describes the cost of capital as increasing with larger capital expenditures [1, 2, 4, 5, 14, 18]. This positive slope is a linearization of the underlying step function which is said to result from the firm's cost of capital increasing as the firm is forced to utilize increasingly more expensive funding sources. One break-point is generally presented as that resulting from changing the funding of the equity portion of the capital budget from saved earnings to newly issued common stock. Other break-points are most commonly said to result from higher required returns by investors in order to absorb additional securities or from other similar causes of higher required returns. These conditions are portrayed in Figure 1. This linearized, positively sloped function is used in many texts in developing rules for deciding on the firm's capital budget and its level of dividends.

FIGURE 1

**Textbook Portrayal of the Cost of Capital vs. Capital Budget Size Relationship**



Evidence from several sources seems to indicate that business decision makers, at least with larger firms, do not perceive the relationship in this way. Firms are observed to issue cash dividends during the same periods when they sell new common stock. Further, a recent questionnaire survey has cast some doubt as to the relevance of the hypothesized break-points. Gitman and Mercurio found that only about 16 percent of the firms responding to their survey differentiated between the cost of retained earnings and the cost of new common shares [7]. Questionnaire surveys have also shown that many firms ration captial, but that this rationing is caused by an internal management debt limit, rather than the higher cost effect as more securities are issued. [6, 7]

This paper proceeds as follows: First, the issue of higher required investor returns for increasing amounts of financing is considered. It will be argued that recent research in efficient markets indicates that these increased required

---

**Frederick C. Scherr is Associate Professor of Finance at West Virginia University. He wishes to thank the participants at the Issues in Capital Budgeting session of the Fifty-Third Annual Conference of the Southern Finance Association, where a preliminary version of this paper was presented, for their valuable comments.*

returns probably do not occur. The differences between the marginal costs of capital using internal vs. external equity sources are then examined. Based on the difference in these two costs of capital and the flotation cost involved in issuing new equity, some texts recommend reducing the firm's cash dividends in times of substantial capital funding requirements. Costs of capital using internal and external equity are computed for a sample of large firms. The differences in the costs of capital are discussed relative to current research on clientele effects. It is concluded that for firms with substantial dividend clienteles, the inconvenience and cost to shareholders resulting from the shifting dividend payments probably outweighs effects due to additional flotation costs, given the relatively small cost of capital differences found in the sample. With no increased required returns for larger issues and a very small increment due to equity flotation, the cost of capital function would be nearly horizontal, which is how it is perceived by businessmen.

### Required Investment Returns and Capital Budget Size

Some texts [e.g., 14] calculate example breakpoints in the MCC function without explicitly stating a reason for the increased cost of a particular security. Most texts [1, pp. 233-234; 18, p. 409; 5, pp. 454-455; 2, pp. 560-561] however, seem to rely on the "price pressure" hypothesis to explain their contention of increased required returns. As Brigham explains:

> As companies raise larger and larger sums during a given time period, the costs of both debt and equity components begin to rise . . . just as corporations cannot hire unlimited numbers of workers at a constant wage, neither can they raise unlimited amounts of capital at a constant cost. [2, pp. 560-561].

The price pressure hypothesis holds that markets are sufficiently thin and therefore they cannot absorb large amounts of securities without increased required returns. That is, it is postulated that firms face a supply curve for capital with a perceptible slope. This is clearly an empirical matter regarding the depth of markets relative to the size of security issues. If markets for an issue with a particular set of risk-return characteristics are relatively deep, then large amounts of such securities can be absorbed with little price effects. In this case, the MCC function would be perceived by firms as nonsloping for most feasible capital budget sizes. If markets are relatively thin, then the break-points are likely to occur within the practical budget size range. It should be strongly noted that the price pressure hypothesis implies inefficient markets, since under this hypothesis a particular security with certain risk-return characteristics would be sold at different prices, depending on the amount of this security offered for sale.

Several tests of the price pressure hypothesis have appeared in the finance literature. Scholes [15] and Krauss and Stoll [10] studied the effects of large block trades on security prices. Both found small, immediate, and permanent price declines for the involved securities. However, Scholes found no association between the size of the sale and the price decline; the decline appeared to be due to adverse information regarding the firm. Krauss and Stoll did find a correlation between trade size and price effect but also were not able to rule out information effects.

A more recent investigation of the relationship was undertaken by Hess and Frost [8]. Utilizing data on new issues of utilities' common stock, they estimated regression equations explicitly testing the extent and permanence of price change effects. This methodology separated quantity and information effects. They found no evidence of an inverse relationship between return on the security after the issue and issue size.

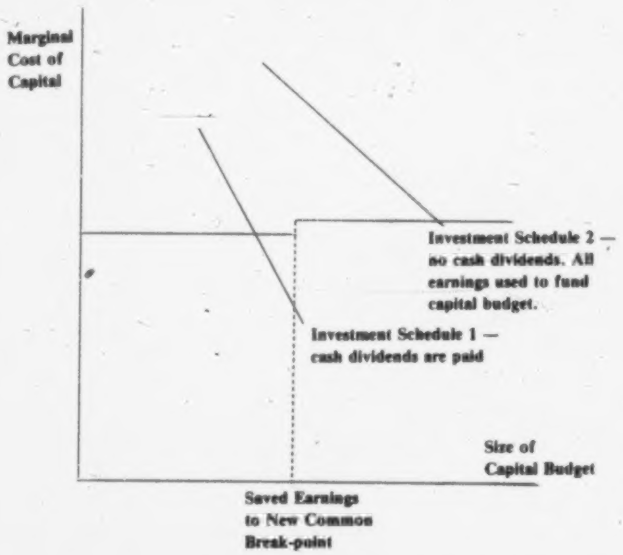
In summary, it would seem that recent research has not found that the price pressure effect holds in modern financial markets, at least for the strata of firms involved in these studies. It would seem that any positive slope on the MCC function should not be attributed to this effect.

### The Internal-External Equity Break-Point

The residual theory of dividends, discussed in several texts, is a methodology for simultaneously determining the firm's capital budget and dividend payout. In this methodology, the returns on new projects (presumably adjusted for risk) are compared to required returns, where these required returns are evidenced by the MCC. Projects with returns above the MCC at the particular budget-size level are accepted; projects with insufficient returns are rejected. If the investment opportunity schedule cuts the MCC schedule to the right of the internal-external equity breakpoint, no dividends are paid and new common shares are sold. A graphical portrayal is presente in Figure 2 for an MCC function containing the internal-external equity breakpoint only.

FIGURE 2

**Textbook Portrayal of Residual Dividend Theory**



This methodology minimizes new equity flotation costs but entails a highly variable dividend stream.[1] Depending on the business cycle and the firm's fortunes, both the investment schedule and the internal-external breakpoint can shift substantially from one year to another. The internal-external breakpoint shifts because of changes in the supply of internal equity funds; the investment schedule shifts because of changing investment opportunities and changing estimates of cash flow on these opportunities. For example, a firm may have several years of substantial earnings and few investment opportunities. The residual theory would recommend a high dividend-payout ratio. During the next year, lower earnings and/or larger opportunities may require a complete elimination of the cash dividend via the residual theory. This would certainly inconvenience shareholders who had held to stock for its high dividend payments; they would have to sell shares, and incur transaction costs to regenerate the lost dividends. It should be clear that the tradeoff here is between the effect of additional flotation costs on the firm's cost of capital and the extent of the firm's dividend clienteles. Let us deal first with the magnitude of the equity flotation cost effect on the cost of capital.

Let us assume a firm financed by debt and equity with no convertible securities. Using the Gordon perpetual-growth dividend-capitalization model to value equity, the firm's marginal cost of capital when internal equity is used is:

$$MCC(int) = W((D/P) + g) + (1\text{-}W)K(1\text{-}T) \qquad (1)$$

Where W is the structural weight for equity, D is the next period's cash dividend to common shareholders, P is the firm's common share price, g is the dividend growth rate, K is the required return on new debt, and T is the firm's tax rate. If new common shares are used to finance the equity portion, the formula is:

$$MCC(ext) = W((D/(P(1\text{-}F))) + g) + (1\text{-}W)K(1\text{-}T) \qquad (2)$$

Where F is the flotation on new common shares as a percent of the shares' price. Subtracting equation (1) from equation (2) gives the increase in MCC due to equity flotation:

$$MCC = (WD/P)\,(F/(1\text{-}F)) \qquad (3)$$

From this formula, it is clear that the difference between the firm's cost of capital using internal vs. external equity depends not only on the flotation (F), but also on the proportion of equity used (W), the firm's dividend (D), and the firm's share price (P). To get some idea of the magnitude of this MCC difference for real firms' capital structures, stock price levels, and dividend policies, a random sample of fifteen firms was drawn from the 1981 *Fortune's* 500 listing and their MCCs mechanically computed using equation (1).[2] No attempt was made to assess the appropriateness of the constant-growth model for each of the firms in the sample. Instead, it was assumed that the model applied, on average, for large publicly-traded firms. The Capital Asset Pricing Model (CAPM) can also be used to estimate the cost of common shares, particularly where the assumptions of the Gordon model do not seem to hold, but the CAPM makes no provision for flotation expenses (the underlying assumptions of the CAPM include frictionless markets). Considering the size of the firms involved, a 3.5 percent flotation on new equity was assumed.[3] The results are presented in Table 1. The unusually high or low estimated costs of equity for some of the firms in the sample are in general effects of unusual earnings growth estimates. For example, Bethlehem Steel's estimated growth rate was 4.4 percent, resulting in an estimated cost of retained earnings of 7.99 percent; Amsted Industries' estimated growth rate was 18.7 percent, resulting in an estimated cost of retained earnings of 27.01 percent. In such cases, the estimated growth rate may be suspect. However, as equation (3) shows, the difference in MCC does not depend on the estimated growth rate. It would seem from these results that the internal-external equity shift results in a rather small increment to the cost of capital: an average of .17 percent for the fifteen firms in the sample.

Dividend clientele theory holds that investors purchase shares based on their tax status, with those in relatively high brackets preferring low-payout, high-growth shares and those in relatively low brackets preferring high-payout, low-growth shares. The validity of constant-payout dividend policies thus depends on the existence of dividend clienteles, the magnitude of transaction costs necessary for clienteles to regenerate their preferred dividend stream by buying or selling shares, and the magnitude of the internal-external MCC increment. The latter is the penalty paid by the firm for issuing shares when retained earnings could be used. As previously discussed, the MCC increment for large industrial firms seems to be quite small. Further, there is increasing evidence, based on the behavior of stock prices and their dividend yields, of the existence of tax-induced dividend clientele effects [3, 9, 12, 13].[4] If dividend clienteles exist, there are transaction costs for trading shares, and the penalty for using outside equity financing is small, it is almost certainly in equity holders' interests to reject the residual theory and adopt a relatively constant dollar payout policy. We argue that these are the circumstances faced by many large publicly traded firms in today's markets.

## Summary and Conclusions

The basic question addressed in this paper is: what is the shape of the function relating the level of the firm's marginal cost of capital (with capital structure held constant) to the size of the firm's capital budget? Many texts present this function as a positively-sloped linearization of an underlying step function. The two most common reasons given in texts for these steps are increased required returns to investors in order to absorb larger security issues and the increase in common equity costs due to the shift from internal to external equity funds. We argued that the first reason is a version of the price pressure hypothesis, which has in general not been supported by empirical studies of the prices of publicly-traded securities.

The step induced by the internal-to-external equity shift does, however, exist and is used by many texts as the basis for a dividend payout decision methodology. This methodology can produce a relatively variable-payout dividend stream which inconveniences investors who purchased the

## TABLE 1

### Internal-External Equity MCC Differences for Fifteen Fortune 500 Firms

| 1981 Fortune 500 Rank | Firm Name | Cost of Retained Earnings* | Cost of New Common** | Cost of New Debt*** | Weight for Equity**** | Weight for Debt | MCC-Internal Equity***** | MCC-External Equity***** | Differences in MCCs |
|---|---|---|---|---|---|---|---|---|---|
| 008 | IBM | 18.34% | 18.58% | 7.48% | 87.19% | 12.81% | 16.95% | 17.16% | 0.21% |
| 047 | Bethlehem Steel | 7.99% | 8.12% | 8.22% | 73.95% | 26.05% | 8.05% | 8.15% | 0.10% |
| 112 | Diamond Shamrock | 20.39% | 20.66% | 10.40% | 54.62% | 45.38% | 15.85% | 16.00% | 0.15% |
| 153 | Campbell Soup | 15.08% | 15.36% | 7.51% | 86.92% | 13.08% | 14.88% | 14.34% | 0.25% |
| 185 | Baker International | 32.35% | 32.42% | 7.92% | 76.62% | 23.38% | 26.63% | 26.69% | 0.06% |
| 219 | General Signal | 19.82% | 19.98% | 7.01% | 89.98% | 10,02% | 18.54% | 18.68% | 0.14% |
| 236 | Cheseborough Ponds | 18.88% | 19.07% | 7.73% | 77.53% | 22.47% | 16.38% | 16.52% | 0.14% |
| 321 | ACF Industries | 18.07% | 18.34% | 7.40% | 51.58% | 48.42% | 12.90% | 13.04% | 0.14% |
| 345 | Amsted Industries | 27.01% | 27.31% | no L.T.D. | 100.00% | 0.00% | 27.01% | 27.31% | 0.30% |
| 350 | G. Heileman Brewing | 20.62% | 20.70% | 8.79% | 74.71% | 25.29% | 17.63% | 17.69% | 0.06% |
| 368 | Brockway Glass | 9.74% | 10.04% | 8.30% | 70.98% | 29.02% | 9.32% | 9.54% | 0.22% |
| 392 | Ferro Corp. | 13.22% | 13.39% | 4.10% | 84.49% | 15.51% | 11.81% | 11.95% | 0.14% |
| 442 | Briggs & Stratton | 11.57% | 11.81% | no L.T.D. | 100.00% | 0.00% | 11.57% | 11.81% | 0.23% |
| 445 | Hoover Universal | 19.37% | 19.63% | 6.72% | 72.72% | 27.28% | 15.92% | 16.10% | 0.19% |
| 483 | Ideal Basic Ind. | 18.83% | 19.14% | 9.10% | 50.66% | 29.34% | 14.03% | 14.19% | 0.16% |

*1971-1981 Fortune 500 EPS growth rate used for G. D computed on 1981 com. div. times (1 + G). D based on trading price of common shares on last day of firm's fiscal year.

**3.5 percent flotation assumed for F.

***Yield to maturity on largest publicly-traded debt issue times (1-T). Issue price based on closing price on last day of firm's fiscal 1981. A 46 percent rate was assumed for T.

****Fiscal year-end 1981 book values used for simplicity. Calculated as (book equity)/(book equity plus interest-bearing long term debt, current and long-term portions).

*****MCCs have been completely calculated here, rather than using the more direct method of equation (3) to accommodate those readers interested in examining the relative magnitudes of the various MCCs.

firm's shares based on its present dividend payout. The question here is which effect is larger: the increase in MCC due to the discontinuity or the transaction costs to dividend clienteles to reconstitute the firm's action by selling shares if the payout is below their preferred level or buying shares if the payout is above their preferred level. Based on recent research regarding the existence of dividend clienteles, the fact that there are transaction costs for buying and selling shares, and the small (.17 percent average) difference we found in the MCC for our sample, we argue that this MCC step is probably immaterial. These conclusions are in line with the survey results of executives discussed earlier.

These conclusions should, however, be viewed fairly restrictively. While the average difference in MCC for the sample was small, results for some individual firms were substantially higher (maximum: .30 percent). Also, the sample used in computing the MCC difference was of very large firms. The security issues of such firms are of sufficient size that their underwriting costs are in the 3-4 percent range. Smaller firms with smaller security issues will pay larger flotations. Further, the markets for their securities may be thinner (less efficient) than those for the securities of larger firms. Thus, small firms may well face a positively sloped MCC versus capital budget function.

---

***References***

1. S.B. Block and G.A. Hirt, *Foundations of Financial Management,* Homewood, IL, Irwin, 1978.
2. E.F. Brigham, *Financial Management: Theory and Practice,* Third Edition, Chicago, Dryden Press, 1982.
3. E.J. Elton and M.J. Gruber, "Marginal Stockholders Tax Rates and the Clientele Effect," *Review of Economics and Statistics* (February 1970), pp. 68-74.
4. G.N. Engler, *Business Financial Management,* Revised Edition, Dallas, Business Publications, 1978.
5. L.J. Gitman, *Principles of Managerial Finance,* Third Edition, New York, Harper and Row, 1982.
6. L.J. Gitman and J.R. Forrester, "A Survey of Capital Budgeting Techniques Used by Major U.S. Firms," *Financial Management* (Fall 1977), pp. 66-77.
7. L.J. Gitman and V.A Mercurio, "Cost of Capital Techniques Used by Major U.S. Firms: Survey and Analysis of Fortunes' 1,000," *Financial Management* (Winter 1982), pp. 21-29.
8. A.C. Hess and P.A. Frost, "Tests for Price Effects of New Issues of Seasoned Securities," *Journal of Finance* (March 1982), pp. 11-25.
9. A. Kalay, "The Ex-Dividend Day Behavior of Stock Prices: A Reexamination of the Clientele Effect," *Journal of Finance* (September 1982), pp. 1059-1070.
10. A. Krauss and H.R. Stoll, "Price Impacts of Block Trading on the New York Stock Exchange," *Journal of Finance* (June 1972), pp. 569-588.
11. W.G. Lewellen, K.L. Stanley, R.C. Lease, and G. Schlarbaum, "Some Direct Evidence on the Dividend Clientele Phenomenon," *Journal of*

*Finance* (December 1978), pp. 1385-1399.

12. R.H. Litzenberger and K. Ramaswany, "Dividends, Short Selling Restriction, Tax Induced Investor Clienteles and Market Equilibrium," *Journal of Finance* (May 1980), pp. 469-482.
13. R.H. Litzenberger and K. Ramaswany, "The Effect of Personal Taxes and Dividends on Capital Asset Prices: Theory and Empirical Evidence," *Journal of Financial Economics* (June 1979), pp. 163-195.
14. J.W. Petty, A.J. Keown, D.F. Scott, Jr., and J.D. Martin, *Basic Financial Management*, Second Edition, Englewood Cliffs, N.J., Prentice-Hall. 1982.
15. M.S. Scholes, "The Market for Securities: Substitution versus Price Pressure and the Effects of Information on Share Price," *Journal of Business* (April 1972), pp. 179-211.
16. Securities and Exchange Commission, *Cost of Flotation of Registered Equity Issues*, 1971-1972, Washington, U.S. Government Printing Office, 1974.
17. C.W. Smith, Jr., "Substitute Methods for Raising Additional Capital: Rights Offerings versus Underwritten Issues," *Journal of Financial Economics* (December 1977).
18. J.F. Weston and E.F. Brigham, *Essentials of Managerial Finance*, Sixth Edition, Chicago, Dryden Press, 1982.

***Footnotes:***

[1] Note that flotation on new debt does not generate a break-point since it is usually assumed that new debt is issued at all capital budget levels.

[2] Several restrictions were put on this sample in order that the firms and their capital structures fit the assumptions of the models used in developing equation (1). These restrictions were: 1) the firms had to have no outstanding convertible debt or preferred stock; 2) the firms had to have paid a common cash dividend in 1981; 3) the firms had to have positive earnings in fiscal 1971 and 1981 (so that a growth rate could be computed; this growth rate was used as an estimate of the long-term growth rate of common cash dividends); and 4) at least one of the firm's long-term interest bearing debt issues (if any such debt was used) had to be publicly traded (so that a yield to maturity based on current market price could be calculated).

[3] It is well known that this flotation falls with issue size. The firms in the sample are, however, generally quite large. The 3.5 percent figure assumed is the average for underwritten issues over $50 million from [16]. Somewhat later studies place this flotation if the issue is underwritten at closer to 4 percent [17]. The use of rights without standby underwriting for security issues of this size can, however, reduce flotation costs to virtually zero and almost eliminate the internal-external equity MCC effect. Data on rights financing costs are also presented in [17]. The use of the new shelf registration procedures may also substantially reduce flotation costs.

[4] Though it must be said that such effects are not confirmed by shareholder surveys; [see 11].

The Bureau of Business and Economic Research of the University of Nevada, Reno, will be publishing:

## THE GAMBLING STUDIES: PROCEEDINGS OF THE SIXTH NATIONAL CONFERENCE ON GAMBLING AND RISK TAKING

**edited by William R. Eadington**
**Professor of Economics, University of Nevada Reno**

THE GAMBLING STUDIES will include all the professional and scholarly papers that were presented at the Sixth National Conference on Gambling and Risk Taking. The Conference, which was held in Atlantic City, New Jersey, in December, 1984, was cosponsored by the Bureau of Business and Economic Research of the University of Nevada, Reno, and the American Studies Program of the Pennsylvania State University. Altogether, THE GAMBLING STUDIES, which is being issued in five volumes, includes nearly 100 papers.

The following is a price list of the volumes of THE GAMBLING STUDIES. All volumes are hardbound:

VOLUME 1: GAMBLING AND PUBLIC POLICY: ISSUES IN THE UNITED STATES AND ABROAD
Eighteen papers, Price: $40.00

VOLUME 2: CASINO GAMBLING: BUSINESS AND ECONOMIC ISSUES
Sixteen papers, Price: $35.00

VOLUME 3: SOCIAL, BEHAVIORAL AND ECONOMIC INTERPRETATIONS OF GAMBLERS AND GAMBLING BEHAVIOR
Eighteen papers, Price: $35.00

VOLUME 4: INVESTMENTS, WAGERS AND GAMING: MATHEMATICAL AND STRUCTURAL ANALYSIS OF GAMBLING OPPORTUNITIES
Twenty papers, Price: $40.00

VOLUME 5: THE PHENOMENON OF PATHOLOGICAL GAMBLING: PSYCHOLOGICAL THEORIES AND TREATMENT STRATEGIES
Twenty papers, Price: $40.00

TOTAL SET OF FIVE VOLUMES, Price: $180.00

Orders must be accompanied by payment in full or a purchase order. Checks should be made payable to the BOARD OF REGENTS and sent to:

Bureau of Business and Economic Research
**THE GAMBLING STUDIES**
University of Nevada, Reno
Reno, Nevada 89557-0016

Abstracts of the papers presented at the Conference are available from the Bureau on request at a price of $3.00. THE GAMBLING STUDIES will be available by April, 1985. For further information, write the Bureau or call (702) 784-6877.

# Nevada Economic Indicators

## Statewide Statistical Data

| | July 1984 | August 1984 | September 1984 | 3rd Quarter 1984 | PERCENT CHANGE 2nd Quarter-1984 3rd Quarter-1984 | PERCENT CHANGE 3rd Quarter-1983 3rd Quarter-1984 |
|---|---|---|---|---|---|---|
| Total Labor Force (000's) | 495.5† | 499.7† | 501.8 | 499.0 | + .1 | + 1.5 |
| Total Employment (000's) | 457.4† | 460.3† | 461.7 | 459.8 | + 1.4 | + 2.7 |
| Unemployment (000's) | 36.7† | 38.0† | 38.7 | 37.8 | + 9.4 | − 14.1 |
| Unemployment Rate | 7.4† | 7.6† | 7.7 | 7.6 | + 9.1 | − 15.6 |
| Unemployment Rate (Seasonally Adjusted) | 7.7† | 8.2† | 8.5 | 8.1 | + 15.1 | − 14.1 |
| Agricultural Empl. (000's) | 6.7† | 7.2† | 5.9 | 6.6 | + 18.6 | + 0.0 |
| Establishment Based Industrial Employment | | | | | | |
| Total All Industries (000's) | 420.1† | 420.7† | 423.9 | 421.6 | + 1.2 | + 2.3 |
| Mining | 6.5† | 6.6† | 6.5 | 6.5 | + 2.1 | + 5.9 |
| Contract Construction | 21.3† | 21.1† | 20.8 | 21.1 | + .3 | − .9 |
| Manufacturing | 20.4† | 20.5† | 20.3 | 20.4 | + 1.0 | + 5.7 |
| Transportation & Utilities | | | | | | |
| Transportation | 13.3† | 13.5† | 13.5 | 13.4 | + 0.7 | + 2.5 |
| Railroads | 1.4† | 1.4† | 1.4 | 1.4 | + 0.0 | + 0.0 |
| Air | 2.9† | 2.9† | 3.0 | 2.9 | − 2.2 | − 2.2 |
| Public Utilities | 11.3† | 11.2† | 11.1 | 11.2 | − 1.2 | − .6 |
| Total Trade | 83.7† | 83.9† | 84.5 | 84.0 | + 1.6 | + 2.5 |
| Wholesale Trade | 14.2† | 14.2† | 14.3 | 14.2 | + 1.2 | + 1.4 |
| Retail Trade | 69.5† | 69.7† | 70.2 | 69.8 | + 1.7 | + 2.7 |
| Finance, Ins., Real Estate | 19.2† | 19.1† | 19.0 | 19.1 | − .7 | + .4 |
| Service Industries | 188.1† | 188.1† | 188.4 | 188.2 | + 2.9 | + 2.1 |
| Hotels, Amusement and Recreation Combined | 123.0† | 123.0† | 123.3 | 123.1 | + 4.1 | + 1.8 |
| Medical and Health | 15.2† | 15.1† | 15.1 | 15.1 | − 1.7 | − 4.0 |
| Total Government | 56.3† | 56.7† | 59.8 | 57.6 | − 3.0 | + 3.5 |
| Federal | 10.6† | 10.6† | 10.4 | 10.5 | + 4.3 | + 6.4 |
| State and Local | 45.7† | 46.1† | 49.4 | 47.1 | − 4.5 | + 2.8 |
| Education | 17.2† | 17.6† | 21.5 | 18.8 | − 12.5 | + 8.7 |
| Average Weekly Earnings in Selected Industries | | | | | | |
| Mining | 549.08† | 547.23† | 559.44 | 551.92 | + 1.0 | + 2.6 |
| Construction | 594.72† | 601.55† | 621.97 | 606.08 | − 3.5 | + 3.3 |
| Manufacturing | 357.90† | 354.38† | 365.49 | 359.26 | − .9 | + 2.1 |
| Public Utilities | 524.15† | 515.84† | 506.00 | 515.33 | + 3.9 | + 9.3 |
| Trade | 277.49† | 278.07† | 277.44 | 277.67 | − .0 | + 2.2 |
| Average Weekly Hours in Selected Industries | | | | | | |
| Mining | 42.4† | 43.5† | 43.3 | 43.1 | + 1.3 | − 1.0 |
| Construction | 35.4† | 35.7† | 37.0 | 36.0 | − 2.3 | + 2.6 |
| Manufacturing | 39.2† | 38.9† | 39.3 | 39.1 | − 1.9 | + .3 |
| Public Utilities | 41.5† | 41.4† | 40.0 | 41.0 | + 1.7 | + 1.9 |
| Trade | 34.6† | 34.5† | 34.0 | 34.4 | + .2 | − .4 |
| Average Hourly Earnings in Selected Industries | | | | | | |
| Mining | 12.95† | 12.58† | 12.92 | 12.82 | − .3 | + 3.6 |
| Construction | 16.80† | 16.85† | 16.81 | 16.82 | − 1.3 | + .8 |
| Manufacturing | 9.13† | 9.11† | 9.30 | 9.1[illegible] | + 1.1 | + 1.9 |
| Public Utilities | 12.63† | 12.46† | 12.65 | 12.5[illegible] | + 2.2 | + 7.2 |
| Trade | 8.02† | 8.06† | 8.16 | 8.08 | − .2 | + 2.6 |

## Statewide Statistical Data (Continued)

| | July 1984 | August 1984 | September 1984 | 3rd Quarter 1984 | PERCENT CHANGE 2nd Quarter-1984 3rd Quarter-1984 | PERCENT CHANGE 3rd Quarter-1983 3rd Quarter-1984 |
|---|---|---|---|---|---|---|
| Construction Activity | | | | | | |
| Residential ($000's) | 49,800 | 70,800 | 66,200 | 186,800 | – 24.7 | – 15.8 |
| Nonresidential ($000's) | 25,900 | 11,400 | 17,800 | 55,100 | – 44.5 | – 41.3 |
| Nonbuliding ($000's) | 28,900 | 10,800 | 28,500 | 68,200 | + 19.2 | – 18.8 |
| Total ($000's) | 104,600 | 93,000 | 112,500 | 310,100 | – 23.3 | – 22.4 |
| # of New Dwelling Units | 613 | 610 | 1,434 | 2,657 | – 42.8 | – 43.9 |
| Tax Collections ($) | | | | | | |
| Liquor | 981,758 | 1,046,125 | 1,153,883 | 3,181,766 | – 9.2 | – 2.9 |
| Cigarette | 1,674,981 | 1,721,507 | 1,648,131 | 5,044,619 | + 3.3 | + 36.5 |
| Fuel | 3,878,878 | 4,092,952 | 4,278,970 | 12,250,800 | + 11.3 | + 1.4 |
| Quarterly Taxable Sales ($000's) | – | – | – | 1,954,734 | + 1.3 | + 10.0 |
| Quarterly Gaming Revenues ($000's) | – | – | – | 829,153 | + 11.0 | + 3.8 |
| Highway Traffic Flow | | | | | | |
| 17 Selected Stations (Avg. Daily) | 131,506 | 136,274 | † 121,747 | 129,842 | + 10.3 | – .7 |

† Revised.

# Las Vegas Standard Metropolitan Statistical Area

| | | | | | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | July 1984 | August 1984 | September 1984 | 3rd Quarter 1984 | 2nd Quarter-1984 3rd Quarter-1984 | 3rd Quarter-1983 3rd Quarter-1984 |
| Total Labor Force (000's) | 276.8† | 278.3† | 281.9 | 279.0 | − 1.0 | + 2.2 |
| Total Employment (000's) | 251.5† | 251.9† | 254.9 | 252.8 | + .9 | + 2.7 |
| Unemployment (000's) | 23.9† | 25.0† | 25.6 | 24.8 | + 16.4 | − 7.2 |
| Unemployment Rate | 8.6† | 9.0† | 9.1 | 8.9 | + 18.1 | − 9.5 |
| Unemployment Rate (Seasonally Adjusted) | 8.8† | 9.3† | 9.6 | 9.2 | + 20.4 | − 7.7 |
| Agricultural Employment (000's) | 1.2† | 1.3† | 1.0 | 1.2 | + 20.7 | + 2.9 |
| Establishment Based Industrial Employment | | | | | | |
| Total All Industries (000's) | 233.9† | 233.7† | 265.5 | 234.7 | + 1.0 | + 1.6 |
| Mining | .4† | .4† | .3 | .4 | + 22.2 | + 22.2 |
| Contract Construction | 12.9† | 12.8† | 12.4 | 12.7 | − 3.3 | + .3 |
| Manufacturing | 7.8† | 7.8† | 7.7 | 7.8 | + 0.0 | + 5.4 |
| Transportation & Utilities | | | | | | |
| Transportation | 8.1† | 8.2† | 8.2 | 8.2 | + 1.7 | + 2.5 |
| Railroads | .5† | .5† | .5 | .5 | + 0.0 | + 0.0 |
| Air | 2.4† | 2.4† | 2.5 | 2.4 | − 2.7 | + 1.4 |
| Public Utilities | 5.9† | 5.8† | 5.7 | 5.8 | − 1.7 | − 3.3 |
| Total Trade | 47.5† | 47.3† | 47.7 | 47.5 | + 1.1 | + 1.9 |
| Wholesale Trade | 7.0† | 7.0† | 7.1 | 7.0 | + 1.0 | + 1.9 |
| Retail Trade | 39.4† | 40.3† | 40.6 | 40.1 | + .2 | + .9 |
| Finance, Ins., Real Estate | 11.1† | 11.1† | 11.2 | 11.1 | + .3 | + 2.1 |
| Service Industries | 114.1† | 114.1† | 115.1 | 114.4 | + 3.2 | + 1.2 |
| Hotels, Gaming & Recreation | 73.2† | 73.3† | 74.3 | 73.6 | + 4.8 | + .1 |
| Total Government | 26.1† | 26.2† | 28.2 | 26.8 | − 5.1 | + 3.2 |
| Federal | 5.4† | 5.3† | 5.3 | 5.3 | + 3.2 | + 8.1 |
| State and Local | 20.7† | 20.9† | 22.9 | 21.5 | − 6.9 | + 2.1 |
| Education | 8.0† | 8.4† | 10.6 | 9.0 | − 16.1 | + 7.1 |
| Construction Activity | | | | | | |
| Las Vegas | | | | | | |
| Residential ($000's) | 6,988 | 7,694 | 7,819 | 22,501 | + 11.8 | − 43.4 |
| Nonresidential ($000's) | 4,389 | 7,628 | 6,649 | 18,666 | − 39.2 | − 24.7 |
| Total Value ($000's) | 11,377 | 15,322 | 14,468 | 41,167 | − 19.0 | − 36.2 |
| # of New Family Units | 200 | 271 | 259 | 730 | + 46.6 | − 49.8 |
| North Las Vegas | | | | | | |
| Residential ($000's) | 70 | 75 | 630 | 775 | + 20.5 | − 79.3 |
| Nonresidential ($000's) | 963 | 2,146 | 2,080 | 5,189 | + 133.2 | + 113.9 |
| Total Value ($000's) | 1,033 | 2,221 | 2,710 | 5,964 | + 107.9 | − 3.3 |
| # of Permits | 37 | 31 | 46 | 114 | − 26.5 | − 21.4 |
| Energy Consumption | | | | | | |
| Sales (000's KWH) | 719,594 | 652,072 | 586,311 | 1,957,977 | + 30.0 | + 5.7 |
| # of Customers | 220,952 | 221,327 | 222,113 | 221,464 | + .9 | + 5.1 |
| Taxable Sales ($000's) | − | − | − | 1,001,403 | − 5.0 | + 6.2 |
| Gaming Revenues ($000's) | − | − | − | 512,307 | + 9.0 | + 4.3 |
| Air Transportation-McCarran | | | | | | |
| Passengers (Arr. & Depart.) | 855,164 | 886,911 | 851,342 | 2,593,417 | + 7.0 | + 1.7 |
| Cargo Enplaned (lbs.) | 1,250,628 | 1,545,123 | 1,294,215 | 4,089,966 | + 62.3 | + 52.0 |
| Cargo Deplaned (lbs.) | 2,072,923 | 2,351,314 | 2,003,476 | 6,427,713 | + 30.3 | + 34.2 |
| Highway Traffic Flow | | | | | | |
| 4 Selected Stations (Avg. Daily) | 36,401 | 38,158 | 33,972 | 36,177 | + 10.8 | + 2.4 |
| Room Tax ($) | | | | | | |
| Clark County | 1,498,640 | 1,454,821 | 1,487,816 | 4,441,277 | − 2.1 | − 8.3 |
| Las Vegas City | 236,721 | 219,152 | 244,169 | 700,042 | − 4.7 | − 2.9 |
| SMSA Total | 1,743,205 | 1,680,756 | 1,738,442 | 5,162,403 | − 2.5 | − 7.6 |

†Revised.

# Reno Standard Metropolitan Statistical Area

| | July 1984 | August 1984 | September 1984 | 3rd Quarter 1984 | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | | | | | 2nd Quarter-1984 3rd Quarter-1984 | 3rd Quarter-1983 3rd Quarter-1984 |
| Total Labor Force (000's) | 134.4† | 135.7† | 135.5 | 135.2 | + 1.3 | + .9 |
| Total Employment (000's) | 127.5† | 128.6† | 128.4 | 128.2 | + 1.5 | + 3.1 |
| Unemployment (000's) | 6.9† | 7.1† | 7.1 | 7.0 | − .5 | − 25.4 |
| Unemployment Rate | 5.1† | 5.2† | 5.3 | 5.2 | − 1.3 | − 26.1 |
| Unemployment Rate | | | | | | |
| (Seasonally Adjusted) | 5.5† | 6.0† | 6.0 | 5.8 | − 7.4 | − 25.8 |
| Agricultural Employment (000's) | .8† | .8† | .7 | .8 | + 21.1 | + 0.0 |
| Establishment Based | | | | | | |
| Industrial Employment | | | | | | |
| Total All Industries (000's) | 117.3† | 117.6† | 118.0 | 117.6 | + 1.1 | + 3.1 |
| Mining | .7† | .8† | .8 | .8 | + 9.5 | + 9.5 |
| Contract Construction | 5.6† | 5.6† | 5.5 | 5.6 | + 6.4 | + 39.2 |
| Manufacturing | 7.8† | 7.9† | 7.8 | 7.8 | + 1.3 | + 4.0 |
| Transportation & Utilities | | | | | | |
| Transportation | 3.9† | 4.0† | 4.0 | 4.0 | − .8 | + 1.7 |
| Railroads | .4† | .4† | .4 | .4 | + 0.0 | + 0.0 |
| Public Utilities | 4.1† | 4.0† | 4.0 | 4.0 | − .8 | + 1.7 |
| Total Trade | 25.8† | 25.9† | 26.1 | 25.9 | + 1.4 | + 4.9 |
| Wholesale Trade | 6.2† | 6.2† | 6.1 | 6.2 | + 1.6 | + 2.8 |
| Retail Trade | 19.6† | 19.7† | 20.0 | 19.8 | + 1.4 | + 5.5 |
| Finance, Ins., Real Estate | 6.1† | 6.0† | 5.9 | 6.0 | − 2.2 | − 5.3 |
| Service Industries | 47.3† | 47.3† | 47.1 | 47.2 | + 2.2 | + 3.6 |
| Hotels, Gaming & Recreation | 30.9† | 30.7† | 30.6 | 30.7 | + 2.7 | + 5.3 |
| Total Government | 16.0† | 16.1† | 16.8 | 16.3 | − 2.4 | + 4.0 |
| Federal | 2.9† | 2.9† | 2.9 | 2.9 | + 1.2 | + 2.4 |
| State and Local | 13.1† | 13.2† | 13.9 | 13.4 | − 3.1 | + 4.4 |
| Education | 6.0† | 6.1† | 6.9 | 6.3 | − 7.3 | + 12.4 |
| Construction Activity | | | | | | |
| Reno | | | | | | |
| Residential ($000's) | 5,985 | 5,647 | 6,906 | 18,538 | + 24.0 | + 71.3 |
| Nonresidential ($000's) | 28,806 | 5,065 | 352 | 34,223 | + 575.0 | + 139.5 |
| Total Value ($000's) | 34,791 | 10,712 | 7,258 | 52,761 | + 101.4 | + 111.0 |
| # of New Family Units | 80 | 128 | 124 | 332 | − 47.3 | + 97.6 |
| Sparks | | | | | | |
| Residential ($000's) | 1,217 | 221 | 1,949 | 3,387 | − 66.9 | − 34.0 |
| Nonresidential ($000's) | 528 | 977 | 1,431 | 2,936 | − 51.7 | − 92.7 |
| Total Value ($000's) | 1,745 | 1,198 | 3,380 | 6,323 | − 61.3 | − 86.0 |
| # of New Family Units | 21 | 5 | 46 | 72 | − 60.0 | − 52.6 |
| Washoe County (Unincorporated) | | | | | | |
| Residential ($000's) | 1,779 | 5,869 | 3,719 | 11,367 | − 24.0 | − 29.8 |
| Nonresidential ($000's) | 1,937 | 3,508 | 2,615 | 8,060 | + 38.2 | + 335.9 |
| Total Value ($000's) | 3,716 | 9,377 | 6,334 | 19,427 | − 6.5 | + 7.7 |
| # of New Family Units | 22 | 79 | 44 | 145 | − 8.8 | − 17.6 |
| Taxable Sales ($000's) | − | − | − | 500,420 | + 6.0 | + 12.3 |
| Gaming Revenues ($000's) | − | − | − | 182,469 | + 8.4 | + 2.7 |
| Air Transportation-Reno | | | | | | |
| Passengers (Arr. & Depart.) | 226,078 | 243,874 | 233,810 | 703,762 | − .0 | − 3.4 |
| Cargo Enplaned (lbs.) | 477,356 | 536,078 | 522,320 | 1,535,754 | − 14.1 | − .7 |
| Cargo Deplaned (lbs.) | 570,658 | 627,426 | 608,380 | 1,806,464 | − 6.8 | − 9.3 |
| Highway Traffic Flow | | | | | | |
| 7 Selected Stations (Avg. Daily) | 75,704 | 77,928 | 70,159 | 74,597 | + 6.8 | − 3.2 |
| Room Tax ($) | | | | | | |
| Washoe County | 79,190 | 10,737 | 120,174 | 210,101 | + 26.9 | − 31.1 |
| Reno | 837,891 | 884,292 | 928,149 | 2,650,332 | + 13.2 | + 8.2 |
| Sparks | 66,412 | 57,603 | 59,881 | 183,896 | + 26.5 | + 15.1 |
| SMSA Total | 983,493 | 1,049,432 | 1,108,204 | 3,141,129 | + 18.5 | + 7.7 |

† Revised.

# Nevada Statistical Data by County

| | July 1984 | August 1984 | September 1984 | 3rd Quarter 1984 | PERCENT CHANGE 2nd Quarter-1984 3rd Quarter-1984 | 3rd Quarter-1983 3rd Quarter-1984 |
|---|---|---|---|---|---|---|
| CARSON CITY | | | | | | |
| Total Labor Force | 20,570† | 20,810† | 20,850 | 20,743 | + .7 | – .6 |
| Total Employment | 19,040† | 19,240† | 19,250 | 19,176 | + .7 | + 1.6 |
| Unemployment | 1,530† | 1,570† | 1,600 | 1,566 | + .4 | – 21.7 |
| Unemployment Rate | 7.4† | 7.5† | 7.7 | 7.5 | – .4 | – 21.5 |
| Construction Activity | | | | | | |
| Residential Value ($000's) | 2,312 | 2,019 | 1,376 | 5,707 | + 14.9 | + 9.5 |
| Nonresidential Value ($000's) | 941 | 596 | 2,367 | 3,904 | + 54.7 | + 65.1 |
| Total Value ($000's) | 3,253 | 2,615 | 3,743 | 9,611 | + 28.3 | + 26.9 |
| # of New Family Units | 33 | 20 | 19 | 72 | + 16.1 | – 8.9 |
| Taxable Sales ($000's) | – | – | – | 67,829 | + 5.0 | + 7.6 |
| Gaming Revenues ($000's) | – | – | – | 12,078 | + 15.3 | + 9.3 |
| CHURCHILL | | | | | | |
| Total Labor Force | 6,960† | 7,080† | 6,890 | 6,976 | + 3.2 | – .8 |
| Total Employment | 6,350† | 6,470† | 6,260 | 6,360 | + 3.3 | + 2.9 |
| Unemployment | 610† | 610† | 630 | 616 | + 2.2 | – 27.5 |
| Unemployment Rate | 8.8† | 8.6† | 9.1 | 8.8 | – .7 | – 26.8 |
| Construction Activity | | | | | | |
| Residential Value ($000's) | 718 | 105 | 145 | 968 | – 19.5 | – 40.5 |
| Nonresidential Value ($000's) | 149 | 0 | 0 | 149 | + 13.7 | – 72.0 |
| Total Value ($000's) | 867 | 105 | 145 | 1,117 | – 16.3 | – 48.2 |
| # of New Family Units | 5 | 3 | 3 | 11 | – 31.3 | – 35.3 |
| Taxable Sales ($000's) | – | – | – | 19,538 | – 1.9 | + 9.4 |
| Gaming Revenues ($000's) | – | – | – | 1,262 | – 2.1 | + 4.6 |
| DOUGLAS | | | | | | |
| Total Labor Force | 9,090† | 9,330† | 9,220 | 9,213 | + 3.4 | + .1 |
| Total Employment | 8,600† | 8,780† | 8,700 | 8,693 | + 4.0 | + 5.5 |
| Unemployment | 490† | 550† | 520 | 520 | – 5.5 | – 17.5 |
| Unemployment Rate | 5.4† | 5.9† | 5.6 | 5.6 | – 9.1 | – 17.6 |
| Taxable Sales ($000's) | – | – | – | 67,883 | + 20.4 | + 17.3 |
| Gaming Revenues ($000's) | – | – | – | 92,188 | + 30.5 | + .7 |
| ELKO | | | | | | |
| Total Labor Force | 13,560† | 13,830† | 13,620 | 13,670 | + 3.3 | – 1.9 |
| Total Employment | 12,920† | 13,200† | 12,940 | 13,020 | + 4.7 | – .4 |
| Unemployment | 640† | 630† | 680 | 650 | – 17.7 | – 25.3 |
| Unemployment Rate | 4.7† | 4.5† | 5.0 | 4.7 | – 20.7 | – 24.5 |
| Construction Activity | | | | | | |
| Elko City | | | | | | |
| Residential ($000's) | 385 | 975 | 559 | 1,919 | + 14.2 | + 120.6 |
| Nonresidential ($000's) | 1,382 | 72 | 201 | 1,655 | – 56.4 | – 52.8 |
| Total Value ($000's) | 1,767 | 1,047 | 760 | 3,574 | – 34.7 | – 18.3 |
| # of New Dwelling Units | 5 | 15 | 10 | 30 | + 11.1 | + 50.0 |
| Taxable Sales ($000's) | – | – | – | 53,990 | + 19.6 | + 19.0 |
| Gaming Revenues ($000's) | – | – | – | 20,668 | + 12.2 | + 11.9 |
| ESMERALDA | | | | | | |
| Total Labor Force | 390† | 410† | 400 | 400 | + 3.4 | – 7.7 |
| Total Employment | 350† | 350† | 350 | 350 | + 1.9 | + 0.0 |
| Unemployment | 40† | 60† | 50 | 50 | + 15.4 | – 40.0 |
| Unemployment Rate | 9.4† | 15.0† | 13.3 | 12.6 | + 6.8 | – 34.5 |
| Taxable Sales ($000's) | – | – | – | 2,947 | + 39.6 | – 9.8 |
| EUREKA | | | | | | |
| Total Labor Force | 880† | 900† | 810 | 863 | + 7.0 | + 2.4 |
| Total Employment | 830† | 860† | 770 | 820 | + 9.8 | + 7.0 |
| Unemployment | 50† | 40† | 40 | 43 | – 27.8 | – 43.5 |
| Unemployment Rate | 5.4† | 4.9† | 5.4 | 5.2 | – 28.6 | – 42.1 |
| Taxable Sales | – | – | – | 5,192 | + 64.6 | + 71.7 |

# Nevada Statistical Data by County (Continued)

| | July 1984 | August 1984 | September 1984 | 3rd Quarter 1984 | PERCENT CHANGE 2nd Quarter-1984 3rd Quarter-1984 | PERCENT CHANGE 3rd Quarter-1983 3rd Quarter-1984 |
|---|---|---|---|---|---|---|
| **HUMBOLDT** | | | | | | |
| Total Labor Force | 6,020† | 6,050† | 5,820 | 5,963 | + 3.7 | − 2.5 |
| Total Employment | 5,560† | 5,620† | 5,420 | 5,533 | + 4.1 | − .4 |
| Unemployment | 460† | 430† | 400 | 430 | − 1.5 | − 23.2 |
| Unemployment Rate | 7.7† | 7.1† | 6.8 | 7.2 | − 5.7 | − 21.5 |
| Taxable Sales ($000's) | — | — | — | 23,151 | − 5.7 | − 12.0 |
| Gaming Revenues ($000's) | — | — | — | 2,765 | + 26.5 | − 1.8 |
| **LANDER** | | | | | | |
| Total Labor Force | 2,620† | 2,670† | 2,650 | 2,646 | + 4.2 | + 8.2 |
| Total Employment | 2,470† | 2,520† | 2,500 | 2,496 | + 4.8 | + 14.2 |
| Unemployment | 150† | 150† | 150 | 150 | + 221.4 | − 42.3 |
| Unemployment Rate | 5.8† | 5.7† | 5.8 | 5.8 | + 220.4 | − 45.8 |
| Taxable Sales ($000's) | — | — | — | 13,165 | + 49.2 | + 24.5 |
| **LINCOLN** | | | | | | |
| Total Labor Force | 2,610† | 2,610† | 2,600 | 2,606 | + 2.0 | − 1.8 |
| Total Employment | 2,460† | 2,480† | 2,440 | 2,460 | + 2.1 | + 37.2 |
| Unemployment | 150† | 130† | 160 | 146 | + 0.0 | − 24.1 |
| Unemployment Rate | 5.6† | 4.8† | 6.2 | 5.5 | − 1.8 | − 24.2 |
| Taxable Sales ($000's) | — | — | — | 1,916 | − 37.9 | − 22.3 |
| **LYON** | | | | | | |
| Total Labor Force | 6,140† | 6,280† | 6,080 | 6,166 | + 3.4 | + 5.7 |
| Total Employment | 5,640† | 5,760† | 5,590 | 5,663 | − 4.3 | + 8.1 |
| Unemployment | 500† | 520† | 490 | 503 | − 5.6 | − 16.1 |
| Unemployment Rate | 8.1† | 8.2† | 8.1 | 8.1 | − 9.0 | − 20.3 |
| Taxable Sales ($000's) | — | — | — | 13,386 | − 3.6 | + 18.8 |
| **MINERAL** | | | | | | |
| Total Labor Force | 3,940† | 3,900† | 3,900 | 3,913 | − .7 | + 1.9 |
| Total Employment | 3,670† | 3,680† | 3,670 | 3,673 | − 1.4 | + 3.4 |
| Unemployment | 270† | 220† | 230 | 240 | + 12.5 | − 16.3 |
| Unemployment Rate | 6.9† | 5.6† | 5.9 | 6.1 | − 100.0 | − 100.0 |
| Taxable Sales ($000's) | — | — | — | 8,891 | + 52.6 | + 50.3 |
| **NYE** | | | | | | |
| Total Labor Force | 3,710† | 3,730† | 3,730 | 3,723 | + 3.0 | + 2.1 |
| Total Employment | 3,400† | 3,480† | 3,470 | 3,450 | + .3 | + 2.2 |
| Unemployment | 310† | 250† | 260 | 273 | + 57.7 | + 1.2 |
| Unemployment Rate | 8.4† | 6.7† | 6.9 | 7.3 | + 53.1 | − .5 |
| Taxable Sales ($000's) | — | — | — | 19,827 | + 1.4 | + 13.6 |
| Gaming Revenues ($000's) | — | — | — | 1,249 | − 13.5 | + 9.1 |
| **PERSHING** | | | | | | |
| Total Labor Force | 1,930† | 1,960† | 1,880 | 1,923 | + 2.1 | − .9 |
| Total Employment | 1,860† | 1,900† | 1,820 | 1,860 | + 3.7 | + 1.3 |
| Unemployment | 70† | 60† | 60 | 63 | − 29.6 | − 38.7 |
| Unemployment Rate | 3.6† | 3.2† | 3.2 | 3.3 | − 29.1 | − 36.3 |
| Taxable Sales ($000's) | — | — | — | 4,220 | − 7.3 | + 3.1 |

† Revised.

# Nevada Statistical Data by County (Continued)

| | | | | | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | July 1984 | August 1984 | September 1984 | 3rd Quarter 1984 | 2nd Quarter-1984 3rd Quarter-1984 | 3rd Quarter-1983 3rd Quarter-1984 |
| STOREY | | | | | | |
| Total Labor Force | 1,400† | 1,430† | 1,380 | 1,403 | + 3.7 | – 9.5 |
| Total Employment | 1,230† | 1,240† | 1,200 | 1,223 | + 4.9 | – 6.4 |
| Unemployment | 170† | 190† | 180 | 180 | – 3.6 | – 26.0 |
| Unemployment Rate | 12.3† | 13.4† | 13.1 | 12.9 | – 6.3 | – 16.9 |
| Taxable Sales ($000's) | – | – | – | 3,409 | + 22.1 | + 28.1 |
| Gaming Revenues ($000's) | – | – | – | 915 | + 41.9 | + 3.5 |
| WHITE PINE | | | | | | |
| Total Labor Force | 4,700† | 4,710† | 4,630 | 4,680 | – .6 | + 2.7 |
| Total Employment | 4,130† | 4,150† | 4,080 | 4,120 | + 1.1 | + 9.9 |
| Unemployment | 570† | 560† | 550 | 560 | – 11.1 | – 30.6 |
| Unemployment Rate | 12.1† | 11.8† | 11.8 | 11.9 | – 11.6 | – 32.6 |
| Construction Activity | | | | | | |
| Total Value ($000's) | 263 | 175 | 123 | 561 | – 67.8 | – 8.3 |
| # of Permits | 26 | 30 | 35 | 91 | – 8.1 | – 1.1 |
| Taxable Sales ($000's) | – | – | – | 11,846 | + 9.7 | + 9.4 |
| Gaming Revenues ($000's) | – | – | – | 578 | + 1.6 | + 4.1 |

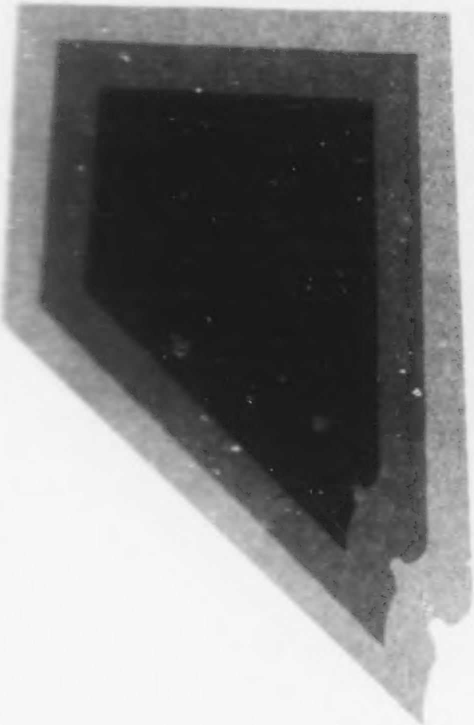
† Revised.

## DATA SOURCES

*Information for statistical tables were developed in cooperation with the following sources:*

Bell Telephone Company of Nevada; California Pacific Utilities Co.; Central Telephone Co.; Churchill County Telephone & Telegraph System; Continental Telephone Co.; F. W. Dodge Co.; Elko City Engineer; City of Fallon; Federal Reserve Bank of San Francisco; First American Title Co. of Nevada (Reno); Lake Mead National Recreation Area; Las Vegas Convention Authority; Las Vegas Dept. of Building & Safety; Lincoln County Telephone System; McCarran International Airport; Moapa Valley Telephone Co.; Mt. Wheeler Power Co.; Nevada Dept. of Highways; Nevada Department of Taxation - Cigarette, Liquor, Fuel, and Sales and Use Tax Divisions; Nevada Employment Security Dept.; Nevada Gaming Commission; Nevada Power Co. - Las Vegas and Elko Divisions; Nevada Telephone & Telegraph Co.; North Las Vegas Building Dept.; Reno Building Inspection Dept.; Reno International Airport; Reno-Sparks Convention Authority; Rio Virgin Telephone Co.; Sparks Convention Authority; Rio Virgin Telephone Co.; Sierra Pacific Power Co.; Sparks Building Dept.; U.S. Dept. of Agriculture-Statistical Reporting Service; U.S. Dept. of Commerce-Bureau of Economic Analysis; Dept. of Labor - Bureau of Labor Statistics; White Pine County Regional Planning Commission.

9/3/85 47920-1A



# NEVADA REVIEW of BUSINESS & ECONOMICS

## SPRING 1985

*Bureau of Business & Economic Research*
*College of Business Administration*
*University of Nevada, Reno*

# NEVADA REVIEW of BUSINESS & ECONOMICS

UNIVERSITY OF NEVADA, RENO
Joseph N. Crowley, *President*

COLLEGE OF BUSINESS ADMINISTRATION
Gordon G. Severance, *Acting Dean*

BUREAU OF BUSINESS AND ECONOMIC RESEARCH
Samuel Males, *Acting Director*
*and Operations Manager*

Albin J. Dahl, *Editor*

Carol Koletar
*Secretary*

Sherrie Bianco
*Clerical Assistant*

Glen Atkinson
*Research Faculty*

Thomas F. Cargill
*Research Faculty*

John L. Dobra
*Research Faculty*

William R. Eadington
*Research Faculty*

Gano S. Evans
*Research Faculty*

Kyung-Il (Ed) Ghymn
*Research Faculty*

Winnie Moore
*Research Assistant*

James Newman
*Research Assistant*

Nevada Review of Business and Economics
A Quarterly Publication
(ISSN 0148-5881)

Copyright 1985 by
The Bureau of Business and
Economic Research
University of Nevada, Reno

POSTMASTER:

Please send Form 3759 to:

Bureau of Business and Economic Research
University of Nevada, Reno
Reno, NV 89557-0016

Phone: (702) 784-6877

Second Class Postage Paid at Reno, NV.

# In This Issue

Spring 1985 Volume IX, No. 1

Legal Gambling:
The Right to Advertise .......... 2
*Robert I. Nelson Rose*

Patterns of Public Response
to Lottery, Horserace, and
Casino Gambling Issues .......... 12
*William N. Thompson*

Nevada Economic Indicators
  Statewide Statistical Data .......... 23
  Las Vegas SMSA Data .......... 25
  Reno SMSA Data .......... 26
  Nevada Statistical Data by County .......... 27
Selected U.S. Economic Indicators .......... 30

The Gambling Studies: Proceedings of the Sixth
National Conference on Gambling and Risk Taking .......... 31
William R. Eadington

---

## EDITORIAL REVIEW BOARD

Glen Atkinson
UNIVERSITY OF NEVADA, RENO

William Bible
NEVADA STATE
BUDGET DIRECTOR

Ben Dasher
UNIVERSE LIFE INSURANCE CO.

Gano S. Evans
UNIVERSITY OF NEVADA, RENO

B. J. Fuller
UNIVERSITY OF NEVADA, RENO

Kyung-Il (Ed) Ghymn
UNIVERSITY OF NEVADA, RENO

Andrew Grose
CHIEF OF STAFF
GOVERNOR'S OFFICE
STATE OF NEVADA

Bernard Malamud
UNIVERSITY OF NEVADA, LAS VEGAS

John Nellor
UNIVERSITY OF NEVADA, RENO

Robert C. Weems
UNIVERSITY OF NEVADA, RENO

Sam E. White
PORTLAND STATE UNIVERSITY
PORTLAND, OREGON

Richard E. Wilson
UNIVERSITY OF NEVADA, RENO

Don W. Winne
UNIVERSITY OF NEVADA, RENO

Betty Yantis
UNIVERSITY OF NEVADA, LAS VEGAS

---

In an effort to assure that the articles appearing in the *Review* meet standards which are consistent with the goals of the College of Business Administration and the University of Nevada, Reno, the Editorial Review Board has been created to referee manuscripts submitted for publication. All articles which pertain to the business and economic environment of Nevada and are of a high quality will be considered for publication. All manuscripts should be addressed to the Editor, *Nevada Review of Business and Economics*, Bureau of Business and Economic Research, University of Nevada, Reno, Reno, Nevada 89557-0016.

# Legal Gambling: The Right to Advertise*

*By Professor I. Nelson Rose***

## I. INTRODUCTION

Casinos can advertise.

Legal gambling is the fastest growing, most closely regulated business in the United States;[1] yet it is also the only legal industry in the country that is regularly denied access to radio, television, newspapers and the United States mails.

There is a widespread belief, even among casino executives, that legal gambling establishments must limit their commercial messages to their restaurants, that they can run as many ads as they wish about Las Vegas and Atlantic City, so long as those ads mention only the food and shows. Radio stations refuse to run commercials for legal card clubs or charity bingo games, while saturating the air with promotions for local race tracks and state lotteries. Casino promotional departments are told that they cannot mention blackjack, craps or slot machines on the air; they are told they cannot even respond to a direct request for information from a potential customer if the response would require placing a brochure in the U.S. mail. And yet, they can make mass mailings of the exact same games if those games are played in a tournament.

The truth is that, except for lotteries, there are practically no restrictions on a legal game's right to advertise, and those restrictions that do exist are probably unconstitutional.

How did this general misconception, the idea that legal gambling games cannot advertise, come about? The main culprit is the Federal Communications Commission (FCC) and a set of federal anti-lottery laws passed before the turn of the century.

A legal analysis of any supposed regulations on advertising involves two stages. First, the actual language of the state statute or other government activity is scrutinized to see what exactly is prohibited and what is allowed. Second, the prohibition is tested against standards established by the United States Supreme Court to see whether the prohibition is an unconstitutional infringement of free speech.

In other words the tests are what exactly is the government action and does it apply in this specific case; and second, is the government action constitutional.

This paper will discuss the laws that exist restricting the dissemination of information relating to legal gambling. There are surprisingly few such laws. On the federal level there is a prohibition that states, on its face, that it applies only to lottery ads. Although the statutes are clearly limited to lotteries, the FCC has stated that every casino game is a lottery, including such acknowledged games of skill as poker and blackjack. The FCC has gone further, by informally notifying potential advertisers and broadcasters that it would use its licensing power to sanction any radio or television station that runs a commercial for any such "lottery." I believe such a broad interpretation is not only far beyond what Congress intended when it passed the anti-lottery statutes, but would make the statute unconstitutional.

On the state and local levels there may be additional restrictions; but few such laws are, or can be, as inclusive as commonly believed.

Within the last decade the United States Supreme Court has made it clear that commercial enterprises are protected by the First Amendment guarantees of free speech and freedom of the press. Although a legal business is not entitled to all of the rights accorded non-commercial speech, one standard is clear: the government cannot completely prohibit a lawful business from advertising. If a casino is legal it can advertise.

## II. CONSTITUTIONAL STANDARDS.

Advertisements for legal gambling are commercial speech, a form of expression that is given partial, although not complete, protection under the First Amendment. The states and federal government have the right to prohibit the dissemination of information promoting illegal activities, such as illegal gambling. Government cannot completely prohibit the dissemination of information relating to legal activity such as a licensed game.

The First Amendment of the United States Constitution guarantees "Congress shall make no law . . . abridging the freedom of speech, or of the press." Although the First Amendment is explicitly limited to acts of Congress, the guarantees of free speech and a free press have been expanded to include acts by state governments, through the Fourteenth Amendment. "No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws."

---

**The original version of this paper was read at the Sixth National Conference on Gambling and Risk-Taking, Atlantic City, New Jersey, December, 1984.* ©1984 by the author and printed herein with his permission.

**I. Nelson Rose is Assistant Professor of Law, Whittier College School of Law, Los Angeles, California.

The first question for any constitutional analysis of restrictions on advertisements is whether there is a state action. The constitutional protections of free speech and a free press restrict a government from interfering with an individual's rights; they are not concerned with the actions of one individual against another, unless a government becomes involved. If a person interferes with another person's rights there may be a civil cause of action or even a criminal complaint; however, if there is no state action there is no constitutional issue.

Assuming there is a state action, the next question becomes when can the state interfere with an individual's right to speak. Although the protections on free speech may seem absolute, there clearly are exceptions. A state can make extortion and perjury crimes, it can outlaw pornography, it can allow a person to sue for slander or libel. As Justice Holmes said, "The most stringent protection of free speech would not protect a man in falsely shouting fire in a theatre and causing a panic."[2]

The legal analysis involves balancing the interests of the state in protecting its citizens with the rights of other citizens to exercise their free speech. The United States Supreme Court has wrestled with this problem for two hundred years; only within the last ten years has it attempted to set the standards for commercial speech.

The Supreme Court has extended the protection of the First Amendment to purely commercial speech. In a series of cases beginning in 1975 the high court first implicitly, and then openly, stated that speech that was designed solely as an advertisement was entitled to at least some of the protections of the First Amendment.

The first case of major interest to legal gambling is *Bigelow v. Virginia.*[3] *Bigelow* involved an advertisement for abortion services available in New York, placed in a Charlottesville, Virginia publication. At the time the ad ran the Supreme Court had not yet issued its decision legalizing abortions;[4] abortion was an issue left up to the individual states, much the way legal gambling is today. New York had chosen to legalize abortions and was advertising that fact. However, Virginia had not only decided to outlaw abortions, it passed a statute prohibiting the publication of any information about abortions. The Charlottesville publisher was convicted of violating this Virginia state law.

The Supreme Court held that the abortion advertisement was protected by the First Amendment. Admittedly, the right to an abortion is an important public interest; however, the case can be read in a broader sense: that a state cannot outlaw the advertisement of a business or service that is legal in any other state, even if the business or service would be illegal if carried on in the state in which the advertisement appears. A state that outlaws casino gambling cannot prevent a licensed casino from another state from advertising.

Although *Bigelow* dealt with a state law, the standard was the First Amendment. There is nothing to indicate that the federal government has any greater power to infringe upon free speech or free press than the states. *Bigelow* indicates that the federal anti-lottery statutes that are read to prohibit legal gambling from advertising are unconstitutional.

A second major breakthrough case came in 1976; in that year the Supreme Court for the first time stated explicitly that the First Amendment, as applied to the states through the Fourteenth Amendment, protects commercial speech from unwarranted governmental regulation. *(Virginia Pharmacy Board v. Virginia Citizens Consumer Council).*[5] The case involved attempted state restrictions on price advertising by pharmacists, which the Court struck down as unconstitutional.

Two other cases quickly followed: *Carey v. Population Services International*[6] (advertising of contraceptives) and *Central Hudson Gas and Electric Corp. v. Public Services Commission*[7] (promotional advertising by utilities).

The Supreme Court has given the reasons it expanded the protections of the First Amendment to cover commercial speech. The court "rejected the 'highly paternalistic' view that government has complete power to suppress or regulate commercial speech. People will perceive their own best interests if only they are well enough informed, and the best means to that end is to open the channels of communication, rather than to close them."[8]

The Supreme Court's latest word (apparently meant to be definitive) is a four-part test set forth in *Central Hudson* for measuring whether a government regulation of commercial speech is constitutional.[9] The test requires the following analysis:

1. Is the subject matter lawful and not misleading;
2. Is the asserted governmental interest substantial;
3. Does the regulation directly advance the governmental interest; and
4. Is the regulation no more extensive than necessary to serve that interest.

Although each specific regulation must be tested separately, there are some general conclusions that can be drawn about commercial free speech and legal gambling. The first test is met by definition: the activity that is being prohibited from advertising is lawful; we are concerned only with the rights of legal gambling operations to promote their legal games. There is no indication that legal gambling advertisements would be any more misleading than any other legal business. There is no reason to pass special laws singling out gambling ads since the government already restricts misleading advertisements in general.[10]

The second test is more difficult because we do not know what governmental interest the state would assert. The Court might rule that deterring gambling is a substantial interest; however, it is a difficult argument for any state to make in relation to legal gambling. Almost all states have chosen to make one or more forms of legal gambling available and 17 states, at latest count, spend millions of dollars each year promoting their state lotteries. It is difficult to see what interest the federal government has in preventing casinos from advertising on local radio stations in Nevada. Even the Congress has amended the anti-lottery statutes to allow state lotteries to advertise, under some restrictions. The Supreme Court has stated that the government's interest in restricting information about an activity that is legal is minimal at best.[11]

Again, without knowing the exact government interest it is difficult to say whether a prohibition on advertising passes the third test of directly advancing the governmental interest. Obviously, the most direct attack on gambling would be to make it illegal. Since it has chosen instead to make gambling legal (in most cases highly regulated) the government has a difficult burden even to state what interest it is trying to advance, let alone to defend a restriction on advertising as being the most direct and limited means available.

Although the test laid down by the Supreme Court may be ambiguous,[12] one standard is clear. The last test under *Central Hudson* requires that the governmental interference with free speech be as narrowly drawn as possible. The Court has decided a case in which a government attempted to completely eliminate a form of commercial speech, *Virginia Pharmacy Board v. Virginia Citizens Consumer Council.*[13] A Virginia statute prohibited pharmacists from advertising prices for prescription drugs. The Court ruled that such a blanket prohibition on a form of legal commerce violates the First Amendment. The Court summed up its feelings in the last paragraph of the opinion:

> What is at issue is whether a State may completely suppress the dissemination of concededly truthful information about entirely lawful activity, fearful of that information's effect upon its disseminators and its recipients. Reserving other questions, we conclude that the answer to this one is in the negative.[14]

Since we are limiting this discussion to forms of gambling that are legal under state law, it would be unconstitutional under the commercial free speech doctrine for any government to attempt a complete ban on information or advertising relating to this subject.

Even a partial ban would probably be a violation of the First Amendment. Government is allowed to make limited restrictions on the time and place of public speech, but only if alternative modes of communication are available. In the recent case of *Members of the City Council of the City of Los Angeles, v. Taxpayers for Vincent,*[15] the Court upheld a section of the Los Angeles Municipal Code that prohibits the posting of all signs on public property. The Court stated the ban on such street signs is constitutional because it is content neutral, affecting all signs regardless of the message; people are still free to post signs on private property or distribute handbills; and the ban serves the important public purpose of eliminating traffic hazards.

The Supreme Court has tended to treat broadcasters differently from newspapers; the Court has something of a double standard in terms of access to the press. Newspapers, for example, cannot be forced by the state to run anything.[16] Radio and television stations, on the other hand, can be forced under very limited circumstances to air opposing views.[17] The legal theories seem to be that anyone with a printing press can start a newspaper while the number of broadcast wavelengths available is limited.

Of greater concern is the theory put forth in the famous "Seven Filthy Words" case, in which the Supreme Court upheld the right of the FCC to impose sanctions on a broadcaster who allowed indecent (but not legally obscene) words to be broadcast at a time of the day when children would most likely hear the offensive language.[18] The Justices were greatly split in their reasoning, but there was significant support for the idea that radio and television is somehow more intrusive than newspapers, that children can turn on their sets and be exposed to detrimental subject matter that they would not know about if run in a newspaper. The distinction might allow a carefully drafted statute or regulation to prohibit broadcast advertisements of legal gambling, at least during those times when children would most likely be exposed to the ads.

Such a partial ban would not be constitutional unless it was narrowly limited. Even in the "Seven Filthy Words" case the Court made it clear that "the government must remain neutral in the marketplace of ideas."[19] It was the time and (indecent) manner in which the ideas were expressed that could be regulated, both the content and the context were factors considered by the Court.[20]

A prohibition on advertising of legal gambling would be subject to a number of other constitutional challenges, including the Fourteenth Amendment's protection against state action that denies a citizen equal protection or due process. Of all legal businesses, only legal gambling has been prohibited from telling the public about its goods and services. The discrimination is more blatant in those states that advertise their own state lotteries. The law should not allow one competitor to promote its business while making it a crime for other competitors to do exactly the same thing. Further, an attempt to stifle access by a licensed casino to all media would appear to be overbroad and unconstitutional on its face, since less intrusive regulations are available.

Current federal law has been interpreted to prohibit legal gambling games, other than state lotteries, from advertising through the broadcast media or through the mails. Large circulation newspapers can afford "split" editions: they carry ads for all forms of legal gambling in the papers that are delivered by hand, and print a separate edition for papers sent through the mail. The result has been that small newspapers are foreclosed from carrying information about church and charity bingo, while big papers can run those ads as well as others. This discrimination against small papers and their readers raises constitutional questions involving free speech, free press, and equal protection.[21]

Although there are federal statutes prohibiting the use of the mails for lottery tickets or advertisements, opening of sealed letters without a warrant and probable cause is a clear violation of the Fourth Amendment protections against unreasonable searches and seizures.[22]

Finally, a state that attempted to prohibit advertisement of another state's legal games would find the law challenged under the commerce clause of the United States Constitution.[23] The power of a state to interfere in interstate commerce is extremely limited. Interestingly, the Supreme Court cases that greatly expanded the federal government's right to regulate interstate commerce, while cutting back on the power of the individual states, were "The Lottery Cases,"[24] upholding the constitutionality of the anti-lottery statutes.

Advocates of controls, those who would restrict legal gambling from advertising, have two principal constitutional arguments. First, they argue that the commercial speech cases mentioned above were not "pure" commercial speech, i.e., that each case involved "not only commercial information but factual material of clear public interest which was entitled to Constitutional protection."[25] The second argument relates to the assertion that gambling and alcohol have traditionally been areas left entirely up to the individual states to regulate or even prohibit.[26]

Although the Supreme Court does give commercial speech less protection than other forms of speech, the Court has never indicated that a purely commercial message for a non-essential public good or service would not be protected. In fact, the Court has traditionally been reluctant to even look at the content of messages. Furthermore, the *Central Hudson* tests are designed to weigh the interests of the state against every form of commercial speech, even the most purely commercial.

As for the argument that gambling and alcohol are somehow special, it is unclear why those two areas should be singled out, over say, drugs or firearms. Even granting that alcohol has been a product left to state control, the distinction can be made that the Twenty-First Amendment, which repealed Prohibition, explicitly gave the states power to control liquor.[27] There is no similar constitutional amendment allowing the states to have unchecked control on gambling.

Incidentally, when people discuss "constitutional" issues, they usually mean the United States Constitution. It should be noted that various state constitutions, such as the California Constitution, can and often do give even greater protection to free speech than the federal constitution.[28] A state constitution cannot override a federal law;[29] however, a state or local law that attempted to limit the free speech of a licensed casino in California would be in violation not only of the First Amendment, but of the state sentiments on all subjects, being responsible for the abuse of this right. A law may not restrain or abridge liberty of speech or press."[30]

I have analyzed the constitutional issues at length because every government action is subject to limits imposed by the Constitution. Courts and government attorneys will often have to limit the reach of a statute to keep the law constitutional. Of course, if the statute in question does not cover the activity under consideration then the constitutional issues simply do not arise. If, for example, a statute prohibits lotteries from advertising there are no constitutional issues if the law is simply not applied to non-lottery forms of gambling. The important question is, therefore, are there laws that apply to legal gambling's right to advertise?

## III. FEDERAL RESTRICTIONS

The first step in any analysis on the limitations of free speech is to find the actual statute, ordinance or regulation that purports to limit the right to publish information. The second step is to see whether that government-made restriction is limited enough to pass the tests laid down by the United States Supreme Court to be a constitutional regulation of commercial speech.

There are only a few federal laws that purport to restrict the dissemination of information about gambling in the United States. The United States Criminal Code sections entitled "Lotteries,"[31] the Postal Statute,[32] and other federal statutes dealing with federally insured financial institutions,[33] contain some broad language relating to lotteries.

The principal limit on broadcasting is found in Title 18, Section 1304 of the United States Code, which states:

> Whoever broadcasts by means of any radio station for which a license is required by any law of the United States, or whoever, operating any such station, knowingly permits the broadcasting of, any advertisement of or information concerning any lottery, gift enterprise, or similar scheme, offering prizes dependent in whole or in part upon lot or chance . . . [shall be subject to punishment].

The limits on mail advertising are found in 18 USC §1302: Whoever knowingly deposits in the mail, or sends or delivers by mail:

> Any letter, package, postal card, or circular containing any lottery, gift enterprise, or similar scheme offering prizes dependent in whole or in part upon lot or chance . . .
> Any lottery ticket . . .
> Any check, draft, bill, money, postal note, or money order, for the purchase of any ticket . . .
>
> Any newspaper, circular, pamphlet, or publication of any kind containing any advertisement of any lottery, gift enterprise, or scheme of any kind offering prizes dependent in whole or in part upon lot or chance . . .

[shall be subject to punishment].[34]

The federal statutes were changed by Congress in 1975 to create some limited exemptions for state lotteries.[35] State lotteries alone can advertise and use the mails,[36] though they are permitted to advertise only in limited ways, such as broadcast advertisements within their own states, or in neighboring states, but only if the neighboring state also has a state lottery. At the time the law was amended, New Hampshire could advertise its lottery within its state boundaries, in neighboring Massachusetts because that state also had a lottery, but not in Vermont, because Vermont, although touching New Hampshire, did not have its own lottery. New Hampshire could also not advertise in New York, despite the fact that New York had a state lottery, because the two states are not neighbors.

It is doubtful whether these restrictions on state lotteries would stand up to constitutional scrutiny under the modern commercial free speech standards as spelled out in Section II of this paper.

The Federal Communications Commission (FCC) and the Department of Justice have the power to enforce the 18 U.S.C. §1304 prohibitions on broadcast information related to lotteries.[37] The FCC has, in fact, issued regulations prohibiting broadcasters from carrying "advertisements of or information concerning any lottery, gift enterprise, or similar scheme" with special rules for state lotteries.[38] The Department of Justice, on the other hand, has publicly stated that it has "serious doubts" about the "enforceability of the lottery statute as presently written."[39] The Postal Service has the power to enforce those federal anti-lottery statutes that relate to material placed in the U.S. mail, but seems completely uninterested in attempting to prevent a legal lottery or gambling game from using the mail.

The federal statutes are limited on their face to lotteries or similar schemes. The FCC has interpreted the prohibition to include all forms of gambling, while the Department of Justice and the Postal Service either limit the prohibition to illegal lotteries or question the constitutionality of the laws themselves. The FCC has no power beyond that given it by Congress, and cannot regulate newspapers or the U.S. mails, but the FCC rules and regulations are of worry to broadcasters, since the Commission has the power to impose sanctions, including revoking the license to broadcast.

Although there is no definition of lottery in the statutes, the United States Supreme Court has held that the statutes, being penal in nature, must be construed strictly.[40] The languge of the anti-lottery statutes must be interpreted in the most narrow way possible to achieve the goals Congress had when it first passed these laws.

The legislative history of the statutes indicates Congress meant to limit lotteries, whether legal or illegal, but lotteries only. The lawmakers apparently did not intend to limit lotteries by charity, but their good wishes were swept aside by the poorly worded statute.[41]

The original anti-lottery mail statutes were passed in 1890 in response to the Louisiana Lottery scandal. Congress had tried for 24 years to stem the tide of lottery schemes, which the individual states seemed unable to control.[42] Congress passed the first limitation on state lotteries in 1868.[43] There were continuing debates, and minor and major changes in 1872[44] and 1876.[45] Lotteries continued, however, and pressure grew on Congress to act. President Benjamin Harrison sent a special message to Congress asking for legislation to eliminate the Louisiana Lottery.[46] As the Congressional debates and history make clear, the anti-lottery laws were designed to deal with a specific problem: lotteries.[47].

The federal government's prohibition on the use of the mails by lotteries was expanded to include broadcasting of lottery-related information as part of the Communications Act of 1934.[48] It is important to note that the broadcasting statute again used the word "lottery," despite the fact that many other forms of gambling were then legal; Nevada had legalized all forms of casino gambling, to widespread publicity, just three years earlier.

A survey of the cases brought under the federal laws and regulations indicates that the government meant exactly what it said: these are limitations on the information that can be distributed relating to lotteries. The leading case indicates that the United States Supreme Court construes the federal statutes as limitations on traditional lotteries and related schemes, where the players pool their money for a chance to win a larger share.[49] I have been unable to locate a single case enforcing the lottery statutes or FCC Regulation which did not involve a lottery or a similar scheme, such as bingo or a giveaway drawing. I have found no cases involving non-lottery casino games, let alone card games such as poker. The federal statutes simply do not involve licensed poker clubs, or those casino games that involve a player betting directly against the house.

If Congress had meant to prohibit the broadcasting of information relating to all forms of gambling and not just lotteries it could have easily done so. Title 18, Section 1082(a) of the United States Code makes it unlawful for an American citizen to operate "any gambling establishment on any gambling ship" or "to conduct or deal any gambling game" on an American vessel. A number of other federal statutes speak of "gambling devices,"[50] "bets or wagers,"[51] and "any business enterprise involving gambling."[52]

Other forms of gambling were legal at the time the anti-lottery statutes were enacted, and under the rules of statutory construction the courts must find the intent of Congress was to keep legal those games not included in the definition of "lottery." Draw poker, for example, has been legal in California since at least 1860.[53] Poker and other gambling games were legal in the New Mexico and Arizona territories until 1908, when the territories outlawed gambling in the drives to become states.[54] In Nevada, casino gambling was made legal in 1869[55] and not outlawed until 1909, long after Congress passed the anti-lottery statutes.[56] As a further illustration that not all forms of gambling are lotteries, both California and Nevada have had state constitutional and statutory prohibitions against lotteries from the date they became states, yet both have allowed other forms of gambling to flourish.[57]

The few court cases that have considered non-lottery games have agreed: only lotteries or games of a similar nature are barred from the airwaves and mail. As the United States Court of Appeals for the Fifth Circuit stated in construing the mail statutes, "[T]he use of the mails has not been denied to every form of gambling."[58] Indeed, at least one form of gambling, bookmaking, has been held to be a non-lottery form of gambling and thus not subject to the federal anti-lottery statutes.[59]

Despite the clear intent of Congress to prohibit only lotteries from advertising, the FCC has instituted what can only be described as a reign of terror against all forms of legal gambling. The word terror is appropriate because it implies the fear produced by random, senseless destruction. For non-lottery gambling games it is virtually impossible to know what the FCC will allow and what it will prohibit. As a Las Vegas television executive testified before the United States Senate, "One of the major problems we face with the FCC is that the staff has and will continue to vary its interpretation depending on who is doing the interpreting."[60]

The FCC has issued few formal opinions, but has to decide the question of what is a prohibited "lottery" ad at least twice a day.[61] The FCC's rulings have been inconsistent, both over time and between different games. The FCC thought poker was a game of skill in the early 1970s; today they think it is not a game of skill. Slot machines are clearly gambling devices, entirely dependent on chance, and thus prohibited from advertising by the FCC. Yet, the FCC will allow slot machine tournaments to advertise, based on their impression that tournaments require skill. They have made similar informal rulings for tournament craps and tournament blackjack. Horse tracks run commercials on the radio because the FCC sees handicapping as a skill or horse races as a sport.

None of the prohibitory rulings [has] been made after full hearings with an opportunity for the interested parties to present evidence. The FCC seems to decide each case as it comes up. This, in itself, may be unconstitutional, since there are due process standards for administrative law decisions, particularly where the government administrative body both makes the rules and polices and judges its licensees. In addition, the FCC seems to have stepped far beyond the power delegated it by Congress in striking down forms of gambling that are not prohibited by statute.

The FCC did issue one Policy Statement, since repealed, involving gambling that seemed to be constitutional, at least on its face. In 1964, the FCC prohibited broadcasters from disseminating information which might well be of substantial use to illegal gambling. There is certainly no constitutional protection for illegal gambling; however, the Policy Statement shows how even a regulation that appears to be constitutional can be invalid as applied. The FCC decided that the broadcasting of a legal horse race or its results would aid illegal gambling.[62] Only this year has the FCC admitted that the broadcasting of horse racing is no more of an aid to illegal gambling than the broadcasting of a football or basketball game.[63]

Since only lotteries and similar schemes are affected by the federal statutes, it should be relatively simple to separate those forms that are prohibited from advertising from those not covered by the statute. The Supreme Court has confused the issue by stating that the three essential elements of a lottery are consideration, a prize, and an outcome determined by chance.[64] Anyone familiar with gambling knows that these are the three characteristics of all forms of gambling. The FCC has used the Supreme Court's definition to support the Commission's wide-ranging forays against all forms of gambling.

The justices were dealing with a lottery case when they made their statement, and they did not think to make the distinction between lotteries and other forms of gambling. In *United States v. Rich,*[65] a United States District Court in Illinois was faced with a non-lottery form of gambling, bookmaking. The court noted that the essential elements of a lottery are consideration, prize and chance, but went on to distinguish between the "chance" aspects of a lottery and guessing games on the one hand and the "chance" involved in life insurance, real estate investments, games of skill and horse races on the other. The court construed the statute narrowly, as it must because of its criminal nature, and held that "It thus appears that it is not every conceivable chance which makes a transaction illegal, and that the word 'chance,' as used in the statute, must be construed in connection with the word 'lot' and with the words 'lottery, gift enterprise, or similar scheme.'"[66] The court held that bookmaking is not a lottery and is thus not covered by the anti-lottery statutes.

A lottery requires a pooling of money by the players and the outcome determined by chance factors beyond the control of the players. Despite the FCC's informal opinion, poker is clearly not a lottery because the players have control; skill is a significant factor. Blackjack is similarly not a lottery because it involves skill and player control; in addition, the player is actually playing against the house to see who has the better hand, and there is no pooling of money. Keno, on the other hand, is a form of lottery because the players have no control and there is a pooling of money. It should be noted that at least one judge would have found even keno a non-lottery, at least where the players were not issued tickets obligating the house to pay.[67]

Even if 18 U.S.C. §1304 and the FCC Regulation are construed to apply to all forms of gambling, to be constitutional their prohibitions must be construed to apply only to illegal games. As I have shown, the United States Supreme Court has given limited First Amendment protection to commercial speech.[68] The Court has explicitly stated that the government cannot "completely suppress the dissemination of concededly truthful information about entirely lawful activity . . ."[69] Another federal statute,[70] making it a crime for a person engaged in the business of betting to knowingly use a wire communication facility for the transmission in interstate commerce of information assisting in the placing of bets, was held to be constitutional; but, the statute has been limited to cases where a state penal code makes the betting a crime.[71]

The United States Department of Justice, which shares power with the FCC to enforce the anti-lottery statutes, feels the anti-lottery statutes are unconstitutional under the commercial free speech cases. "[W]e have serious doubts about our ability to enforce the provisions of chapter 61 of title 18, as they apply to advertisement of lotteries legal in a state in which they re conducted."[72]

If the Department of Justice, which is charged with enforcing the law, feels the law is unconstitutional, there is little doubt that given the proper case, a court would throw out the federal anti-lottery statutes.

## IV. STATE RESTRICTIONS

If the federal government had attempted to regulate non-lottery gambling games, an argument could be made that it had preempted the field, leaving no room for state regulation.[73] Since the federal government has not acted the states are free to do so, within constitutional limits. The first question to be decided is: have the states acted to limit the publication of information relating to legal gambling.

### NEVADA

Although Nevada has a complete regulatory system, it has not acted to regulate casino or other gambling advertisements, except in the most general terms. The Regulations of the Nevada Gaming Commission and State Gaming Control Board have a general prohibition against "unsuitable methods of operation," and include as an example, "Failure to conduct advertising and public relations activities in accordance with decency, dignity, good taste, honesty and inoffensiveness."[74] Although the language of this regulation is broad and vague, it is probably constitutional, so long as it is applied in a consistent and very limited way, focusing on the honesty standard. Even this general guideline is applicable only to Nevada licensees; Nevada does not attempt to prevent out-of-state legal operations from advertising within its state boundaries. The language does appear broad enough to cover advertising by Nevada casinos anywhere in the country.[75]

## NEW JERSEY

New Jersey has been more active in the regulation of advertising, at one point requiring casinos to notify the state Casino Control Commission of the copy of advertisements prior to publication.[76] This prior restraint was of questionable constitutionality.

The present standards are probably valid, except for one minor flaw. The regulations are, in fact, examples of the types of limited restrictions on commercial free speech that the Supreme Court apparently had in mind when it set out its balancing tests, weighing the interest of the state to protect its citizens against the interest of the citizens to speak freely and obtain information. Casino licensees can advertise, but "No advertisement shall stress gaming as its dominant theme. All advertising shall portray gaming as an activity conducted in an atmosphere of social graciousness."[77] There are other, similar restrictions requiring good taste and honesty.[78] Although the language is vague, and somewhat incongruous, given Atlantic City's dependence on bussed-in slot players, the intent is clear and consistent with the statutory purposes of casino gambling. These restrictions are constitutional.

One set of restrictions may not be valid. New Jersey allows casinos to inform the public of their locations, hours of operation, amenities and games; however, "No advertising shall divulge any information concerning the size of the casino, gambling odds available or the number of games at the casino."[79] The intent was probably to avoid the periodic advertising wars in Nevada, where each casino proclaims itself, through massive billboards, as having the "loosest slots." Perhaps the state can ban these ads as being deceptive; I would question the constitutionality of a general prohibition on the odds and other information a player needs to make an informed decision whether, and where, to gamble.

New Jersey's regulations, like Nevada's, cover only its own licensees. However, the statute does appear broad enough to cover the advertising by New Jersey casinos anywhere in the country.

## PUERTO RICO

Puerto Rico has gone the furthest in its regulation of legal gambling's right to advertise. The Commonwealth has explicitly prohibited its casinos from offering their facilities to the Puerto Rican public.[80] This statute is of doubtful constitutionality on many grounds, not the least of which is its violation of free speech and denial of equal protection by discriminating against one group of American citizens.

I have been informed that a local judge struck down this statute as it was applied in October of 1984.[81] Apparently, the statute was applied so broadly that a casino representative was not allowed to even hold a press conference and speak about the changes in the law relating to slot machines.

## CALIFORNIA

California does have a few statutes that might apply to casino games; however, the statutes are of questionable constitutionality in light of recent commercial free speech cases. In addition, the few court cases that have construed the statutes have held that they do not apply to lawful activities in neighboring states. It is, in fact, very rare to find a state attempting to regulate an activity that another state has declared legal.

The laws are therefore of little concern to Nevada or Atlantic City casinos. They are of greater concern to legal gaming within the state, such as licensed card rooms.

Card clubs are a regulated industry in California as the operators have to be registered with the state's Attorney General.[82] There are literally hundreds of tables throughout the state, each one licensed to play draw poker, lowball or panguingue. Every city and county in California is given what is known as a local option to decide whether it wishes to license those legal gambling games not prohibited under the state penal code.[83]

Since draw poker is legal in California it would be unconstitutional under the commercial free speech doctrine for any government to attempt a complete ban on information or advertising relating to the subject.

The state has a strong interest in preventing illegal activity; its interest in preventing legal commerce is minor at best . . . The United States Supreme Court established a flat rule in *Virginia State Board of Pharmacy v. Virginia Citizens Consumer Council, Inc.*, that a state may not completely suppress truthful and non-misleading advertising of lawful products or services on the ground that the information would have a harmful effect on the public or on the advertisers. . . .

As of July 1, 1984, there is new legislation operative in the state, the Gaming Registration Act. The Act not only sets up a regulatory system to control legal card clubs, it impliedly allows those card clubs to advertise, creating specific statutory support for the Attorney General's Opinion [that legal poker clubs can advertise]. . . .

The only difference between the two legal forms of gambling prior to July 1, 1984, was that horse racing was explicitly regulated in the state's statutes, while draw poker was regulated solely by local ordinances. With the passage of the Gaming Registration Act, that small difference has been eliminated. If race tracks can advertise merely because they are a regulated legal form of gambling, then licensed card clubs can now also advertise for the exactly the same reason.

Actually the legal argument is much stronger in favor of the right of card clubs to advertise. Although there is no mention of horse racing advertisements in the state statutes,[84] there is a specific reference to advertising by card clubs in the new Gaming Registration Act.

## V. CONCLUSION

There are very few federal, state or other government prohibitions on advertising legal gambling. Most of the statutes that do exist are aimed specifically at lotteries, and even those are of questionable validity given the recent expansion of constitutional protection for commercial free speech. There is one great fly in the ointment: the FCC. So long as the anti-lottery statutes remain on the books, or the FCC chooses to believe that "lottery" includes every form of gambling, radio and television stations will be fearful of running gambling commercials. Legal gambling will remain the only legal business in the United States that cannot advertise.

What can be done?

There are a number of options, all of which entail some risk and require some expense.

The first would be to change the laws, amend the statutes so that only illegal lotteries are prevented from advertising. Three bills introduced in Congress in 1984 attempted to do just that. Senator Laxalt and Representative Reid of Nevada introduced legislation to amend the anti-lottery statutes[85] to make explicit that the prohibition on advertising does not apply to lotteries that are legal under the laws of a state.[86] A separate bill by Representative Sensenbrenner of Wisconsin would add a new section to the anti-lottery statutes, allowing lotteries run by nonprofit organizations to advertise.[87]

The bills are somewhat disturbing because they seem to concede to the FCC's argument that all forms of gambling are lotteries. The bill exempting only charitable lotteries would obviously not solve the problem. However, the other two bills would get the job done: legal gambling would not have to fight for the right to advertise if these bills were passed. Unfortunately, legal gambling first has to fight to get the bills passed.

The bills found considerable support from the legal gaming community, including those areas, such as horse racing, that are exempt under the FCC's own rulings. Also in support were Congressmen who believe in free speech and freedom of the press. The most interesting support came from the Department of Justice, which doubted the constitutionality of the present anti-lottery laws. Even the FCC said it wished it did not have this burden on its back.

And yet, Representative Reid's bill was defeated by the Administrative Law Subcommittee of the House Judiciary Committee on June 28, 1984; and, Senator Laxalt's bill, although approved by the Criminal Law Subcommittee and the Judiciary Committee of the Senate, does not appear headed for early approval by the full Senate. Religious conservatives are blocking what they see as an expansion of gambling and all its accompanying evils.

The fight in Congress is certainly not over; but it will be a long battle fought through various subcommittees and committees and eventually both houses, and on to the President. The bills would also simply exempt legal games from the federal laws; they would not guarantee that the various states will not act to prohibit advertising.

A second route to get the law changed would be to get the FCC to see the error of its ways. A request for a declaratory ruling can be made.[88] Given the statutory language preventing lottery ads from being broadcast, the best a casino could hope for is a ruling that its non-lottery games, like poker, could advertise. The FCC cannot refuse to enforce a statute passed by Congress, even if it wanted to. A ruling by the FCC could set up a court challenge, which is the third route open to legal gambling.

Even without a declaratory ruling by the FCC, legal gambling may ultimately have to file suit in court. The test case should be carefully chosen. A lawsuit over the right to advertise blackjack, for example, might result in a ruling that the anti-lottery statutes simply do not apply, because blackjack is not a lottery. Only blackjack would then be exempt, the laws and FCC regulations would remain on the books.

The perfect test case would be one involving a small, local radio station in Nevada, broadcasting a tasteful, honest ad for keno at two o'clock in the morning. The station would be a party to the lawsuit, since it faces sanctions from the FCC for running the commercial. Other possible parties include the casino that wants to advertise and possibly even an individual gambler, who wants to know what games are available. The station should be heard only in Nevada (possibly an F.M. station will be necessary) so that the federal government will have to justify restricting the flow of information within a state that has chosen to make gambling legal.

The game advertised should be keno because if keno is not a form of lottery then no game played in a casino is a lottery, which would be a victory in itself.

Lastly, the ad must be within the guidelines of the Nevada regulations, must be non-offensive, and must be broadcast at a time that small children will not be inadvertently exposed. Running the ad at two o'clock in the afternoon would be riskier, since the court might decide there is a need for restrictions on broadcasting to protect children. On the other hand, the early morning commercial forces the court to face the compete prohibition on broadcasting laid down in the statute and FCC regulations.

The first battle will be for a preliminary injunction, a hearing held early in the case to decide whether the ads can be run pending the final outcome of the trial. I would expect the losing side to appeal the ruling on the preliminary injunction through the state or federal court system, up to the United States Supreme Court.

Who will fight the test case? It will take a number of years and at least $100,000 to fight a case like this all the way to the United States Supreme Court. All the time there remains the small, but real worry that the radio station's license might be in jeopardy.

Legalized gambling operations have always been extremely reluctant to rock the boat, since they can theoretically be outlawed with a flick of a legislative pen. Who will fight the test case? Whether anyone is willing to come forward remains to be seen.

---

*This section was condensed by the editor.

---

***Footnotes:***

[1] The author has written extensively elsewhere on the reasons for the spread of legalized gambling, the need for tight controls, and the various methods that have been used and are available. Rose, *The Legalization and Control of Casino Gambling,* 8 Fordham Urban L. J. 245 (1979-1980). See, also, Rose, *Once Gambling Is Legalized, State Will Be Stuck With It,* Los Angeles Times, June 26, 1983, §4 at 5, col. 1; and, Rose, *The Spread of Legalized Gambling,* Gambling Times, November, 1982.

[2] *Schenck v. United States,* 249 U.S. 47, 52 (1919).

[3] 421 U.S. 809 (1975).

[4] *Roe v. Wade,* 410 U.S. 113 (1973).

[5] 425 U.S. 748, 761-762 (1976).

[6] 431 U.S. 678 (1977).

[7] 447 U.S. 557 (1980).

[8] *Central Hudson Gas v. Public Service Commission,* 447 U.S. 557, 562 (1980).

[9] 447 U.S. at 564.

[10] The Federal Trade Commission has the power to deal with misleading ads under Section 5 of the Federal Trade Commission Act. See, e.g., 15 U.S.C. §§52 et seq.

[11] Professor Welkowitz of Whittier College School of Law noted that the "substantial interest" test "is easily misused by government regulators to suppress speech about subjects on which the government has an opinion contrary to the advertiser." "Although the commercial speech doctrine is necessarily not content neutral, it can and should be *viewpoint* neutral." Unpublished paper, "Smoke in the Air — Commercial Speech and Broadcasting."

[12] Note, Constitutional Protection of Commercial Speech, 82 Columbia L.R. 720 (1982).

[13] 425 U.S. 748 (1976).

[14] 425 U.S. at 773.

[15] 52 U.S.L.W. 4594 (U.S. 1984).

[16] *Miami Herald Publishing Co. v. Tornillo,* 418 U.S. 241 (1974).

[17] *Red Lion Broadcasting Co. v. Federal Communications Commission,* (1969).

[18] *Federal Communications Commission v. Pacifica Foundation,* 438 U.S. 726, reh den 439 U.S 883 (1978).

[19] 438 U.S. at 745.

[20] 438 U.S. at 744.

[21] See *Minneapolis Star and Tribune Co. v. Minnesota Commissioner of Revenue,* 460 U.S. 575 (1983) (tax singling out only large newspapers violates the first amendment); *A Bill to Allow Advertising of Any State-Sponsored Lottery, Gift Enterprise, or Similar Scheme: Hearing on S.1876 Before the Subcommittee on Criminal Law of the Senate Committee on the Judiciary,* 98th Congress, 1st Sess. 31 (1983) [hereinafter cited as Subcommittee hearings on S.1876] (statement of John F. McMaster).

[22] *Ex Parte Jackson,* 96 U.S. 727 (1877) (upholding mail prohibitions but greatly restricting the government's right to open or seize letters).

[23] U.S. Constitution, Article 1, §8.

[24] *Champion v. Ames,* 188 U.S. 321 (1903); *Francis v. United States,* 188 U.S. 375 (1903).

[25] *Modernizing Federal Restrictions on Gaming Advertising: Report on S.1876 Before the Senate Committee on the Judiciary, 98th Congress, 1st Session 12 (1983) [hereinafter cited as Committee Report on S.1876] (additional views of Orrin G. Hatch).*

[26] Committee Report on S.1876 at p. 13 (additional views of John P. East).

[27] "The transportation or importation into any state, territory, or possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited." U.S. Constitution Amendment XXI, §2.

[28] *San Jose Mercury News v. Municipal Court,* 30 Cal.3d 498, 508 (1982), *Robins v. Pruneyard Shopping Center,* 23 Cal.3d 899, 910, aff'd. 447 U.S. 74, 81 (1980).

[29] "This Constitution, and the laws of the United States . . . shall be the supreme law of the land; and the judges in every state shall be bound thereby, any thing in the Constitution or laws of any state to the contrary notwithstanding." U.S. Constitution, Article VI, clause 2.

[30] California Constitution, Article I, §2, subd. (a).

[31] 18 U.S.C. c.61, §§1301 to 1307.

[32] 39 U.S.C. §3005.

[33] 12 U.S.C. §§339, 1829a, 1730c.

[34] Section 3005 of the Postal Statutes, Title 39, gives the postal officials authority to enforce Section 1302.

[35] 18 U.S.C. §1307 was added and 39 U.S.C. §3005 was amended.

[36] 39 U.S.C. §3005

[37] *Federal Communications Commission v. American Broadcasting Co.,* 347 U.S. 248 (1954).

[38] 47 C.F.R. §73.1211, 40 F.R. 6210, Feb. 10, 1975, as amended at 45 F.R. 6401, Jan. 28, 1980.

[39] Subcommittee Hearings on S.1876 at 6 (Statement of John C. Keeney, Deputy Assistant Attorney General). See also *Hearing on H.R. 4020 and H.R. 5097 Before the Subcommittee on Administrative Law and Governmental Relations of the House Judiciary Commission,* 98th Congress, 1st Session (1983) (statement of John C. Kenney).

[40] *Federal Communications Commission v. American Broadcasting Co.,* 347 U.S. at 296.

[41] 26 Congressional Record 4313 (1894) (Remarks of Mr. Gorman).

[42] The Post Office first sought legislation in 1866, S. 148, 39th Congress, 1st Session.

[43] Act of July 27, 1868, c. 246, 15 Stat. 194.

[44] Act of June 8, 1872, c. 335, 17 Stat. 283 (change of wording made only illegal lotteries subject to federal law).

[45] Act of July 12, 1876, c. 186, §2, 19 Stat. 90 (striking the word "illegal").

[46] "A Compilation of the Messages and Papers of the Presidents 1789-1897," H.R. Misc. Doc. No. 210, pt. 9, 53rd Congress, Session 80-81 (1894) (J. Richardson ed.).

[47] See, e.g., 21 Congressional Record 8698-8721 (1890) concerning H.R. 11569, 51st Congress, 1st Session, at 8706 (1890). For a complete discussion of the history of the anti-lottery statutes, including references to prior bills and the Congressional Record, see National Institute of Law Enforcement and Criminal Justice, Law Enforcement Assistance Administration, United States Department of Justice, The Development of the Law of Gambling: 1776-1976 (1977) (hereinafter "The Development of the Law of Gambling: 1776-1976" beginning at 492; see p. 529 for discussion of extension of prohibition to broadcasters.

[48] Act of June 19, 1934, c. 652, 48 Stat. 1064.

[49] *Federal Communications Comission v. American Broadcasting Company,* supra; see also Annotation, Offenses Against the Mails: What Is A Lottery Or Similar Scheme, 96 L.Ed 312.

[50] 18 U.S.C. §1953.

[51] 18 U.S.C. §1084.

[52] 18 U.S.C. §1952.

[53] California Penal Code §330 (Deering); Stats 1860 c.99 §1 1st sent. p. 69, Deering's Penal Code Annotated.

[54] Currie, *The Transformation of the Southwest: Through the Legal Abolition of Gambling,* The Century Magazine, April 1908, p. 905; Ariz. Laws 1909, c. 92 §1.

[55] Act of March 4, 1869, c. 71, Nevada Laws 119.

[56] Act of March 24, 1909, c. 210, Nevada Laws 307. Total legalization of casino gambling came back to Nevada in 1931, Act of March 19, 1931, c. 99, Nevada Laws 165. The Nevada Legislature did not legalize lotteries, in fact it could not have made lotteries legal if it had wanted, due to the anti-lottery prohibition of the Nevada Constitution, Article 4 §24.

[57] Id. Nevada's constitutional prohibition on lotteries dates from the constitutional conventions of 1863 and 1865, "The Development of the Law of Gambling: 1776-1976." California's constitutional prohibition on lotteries, California Constitution, Article IV §19(a) dates back to the 1849 Constitution, Article IV §27. Both states allow large scale commercial gambling: California has card rooms, Gaming Registration Act, B&P Code §§19800-19826 and horse races, California Constitution, Article IV §19(b), B&P §§19590-19598 (and bingo, which required an amendment to the constitutional prohibition on lotteries, California Constitution, Article IV §19(c)); Nevada, of course has casinos, Nevada Gaming Control Act, Nev.Rev.Stat. c. 463.

[58] *Boasberg v. United States,* 60 F2d 185, 186 (5th Cir. 1932).

[59] *United States v. Rich,* 90 F.Supp. 624 (E.D. Ill. 1950).

[60] Subcommittee Hearings on S.1876 at 20 (Statement of Mark Smith). Some casinos have taken to running their commercials on cable television, in the apparent belief that the FCC does not regulate cable. The FCC does, in fact, have power to regulate cable broadcasts. *Capital Cities Cable, Inc. v. Crisp,* 52 U.S.L.W. 4803 (June 18, 1984). The casinos seem to be relying on the fact that the anti-lottery statutes make it a crime to "broadcast" information. 18 U.S.C. §1304. There is a separate statute that prohibits the transmission of gambling information through wire communication facilities; however, that statute has been limited to illegal gambling. 18 U.S.C. §1084, *United States v. Kelley,* 254 F.Supp. 9 (S.D.N.Y. 1966) (dictum).

[61] Committee Report on S.1876 at 6 (Letter from Bruce E. Fein, General Counsel, FCC).

[62] 32 FCC 705 (1971).

[63] Reported in Gaming Business magazine, September 1984, p. 57.

[64] *Federal Communications Commission v. American Broadcasting Co.,* 347 U.S. 284 (1954).

[65] 90 F.Supp. 624 (E.D.Ill. 1950).

[66] 90 F.Supp. at 629, quoting *Eastman v. Armstrong-Byrd Music Co.,* 212 F. 662, 667 (8th Cir. 1914).

[67] *Boasberg v. United States,* 60 F.2d 185, 186 (5th Cir. 1932) (Foster, dissenting).

[68] See Section II above, and in particular, *Central Hudson Gas v. Public Service Commission,* 447 U.S. 557 (1980).

[69] *Virginia Pharmacy Board v. Virginia Citizens Consumer Council,* 425 U.S. 748, 773 (1976).

[70] 18 U.S.C. §1084.

[71] *United States v. Kelley,* 254 F.Supp. 9 (S.D.N.Y. 1966).

[72] Subcommittee Hearings on S.1876 at 7 (Statement of John C. Keeney).

[73] *Compare, Capital Cities Cable, Inc. v. Crisp,* 52 U.S.L.W. 4803 (June 18, 1984) (Oklahoma cannot prohibit liquor advertisements on cable television broadcasts) *with Dunagin v. City of Oxford, Mississippi,* 718 F.2d 738 (5th Cir. 1983), review denied 52 U.S.L.W. 3917 (June 26, 1984) (Mississippi can impose partial ban on liquor advertising originating within the state).

[74] Reg. 5.011, current as of Aug. 1, 1983.

[75] Nevada does still prohibit lotteries and makes it a misdemeanor to set up an office to sell lottery tickets. Nev.Rev.Stat. 462.050.

[76] 19 N.J.R. 51, amended R.1981 d.409, effective November 2, 1981.

[77] 19 N.J.R. 51-1.3.

[78] 19 N.J.R. 51-1.2.

[79] 19 N.J.R. 51-1.3.

[80] P.R. Laws Ann. tit. 15, §77 (1972).

[81] Conversation with Maria Milagros Soto, Puerto Rican attorney and trustee of the National Association of Gaming Attorneys, October 12, 1984.

[82] The Gaming Registration Act, which took effect July 1, 1984, takes up 26 sections of the Business and Professions Code, beginning with §19800. The Act sets up investigative and registration procedures with the state Attorney General. The Legislature intended that local governments could continue to regulate gaming as well. B&P §19801.

[83] When the California Legislature created the state's Penal Code in 1872, the lawmakers made it clear that there are no longer any "common law crimes." Put another way, noting is illegal in this state unless the state Legislature or a local city or county government has made it illegal.

The California Legislature has made some forms of gambling illegal, as it has the right to do. Draw poker, panguingue and other games played in card rooms are not listed in the applicable sections of the state Penal Code and are therefore legal under state law. Penal Code §§330, 331, *Ex Parte Meyer,* 5 Cal.Unrep. 64, 40 P. 953, 954 (1895); *People v. Lim,* 18 Cal.2d 872, 118 P.2d 472 (1941); *In re Hubbard,* 62 Cal.2d 119, 126, 41 Cal.Rptr. 393, 396 P.2d 809 (1964); *Monterey Club v. Superior Court of Los Angeles,* 48 Cal.App.2d 131, 119 P.2d 349 (1941); *People v. Ambrose,* 122 Cal.App.2d Supp. 966. 265 P.2d 191, 194 (1953). See, also, Rose, *Hold 'Em Poker,* parts I, II, and II, *Gambling Times,* January, February, and March 1985.

[84] Other than the prohibition on selling predictions in B&P §19664.

[85] 18 U.S.C. §1307 and 39 U.S.C. 3005(d).

[86] S. 1876 and H.R. 5097, 98th Congress, 1st Session

[87] H.R. 4020, 98th Congress, 1st Session.

[88] 5 U.S.C. §554(d), 47 CFR 1.2.

# Patterns of Public Response to Lottery, Horserace, and Casino Gambling Issues*

*By William N. Thompson***

## INTRODUCTION

Gambling is probably as old as mankind itself.[1] It has existed in an infinite variety of forms and in almost all places where social activity has been found. And it has certainly been a concern of laws and regulations of almost all governments that have reduced public mandates to writing. In America laws on gambling date from the earliest colonial period. In 1624 the Virginia House of Burgesses commanded that ministers should not spend their "tyme idielie by day or by night, playing dice, cards or any unlawful game." In 1630 the Puritan colony of Massachusetts recognized that gambling was a problem for its population as it ordered that "all persons whatsoever that have cards, dice, or tables in their houses shall make away with them before the next court under pain of punishment."[2]

In all likelihood our Puritan forefathers subsequently became the first illegal gamblers in America. The Dutch colony of New Netherlands was also concerned that there be a separation of church and gaming. In 1656 an ordinance was passed prohibiting card playing on the Sabbath.[3] However, the successor colony of New York under English jurisdiction chose to promote gambling with the establishment of the first trophy race in America in 1665.[4] Since these early colonial dates, American lawbooks have been filled with constitutional mandates, statutes, ordinances, rules, regulations, cases and codes on gaming.

While gaming has been a serious public policy issue, the regulations have often become petty and at times downright ridiculous. Wayne Pelton collected several of these for *Gaming Times Magazine.*[5] He found that the city of McPherson, Kansas, had an ordinance banning small boys from games of marbles, while Richmond, Virginia, made it illegal to flip a coin in order to determine who would pay for a cup of coffee. In Key West, Florida, it was illegal to bet on a turtle race, in Colorado on a dog fight, and in Mirror Lake, New Hampshire on a rat or mice fight. Bets on lariat fishing contests were illegal in Knoxville, while Kansas prohibited hunters from betting on which hunter would shoot the most ducks on a given day. In North Dakota, a law once prohibited gambling while having pretzels and beer, and women were not permitted to drink coffee and gamble in Corvallis, Oregon. Callicon, New York, prohibited gambling while in a barber chair, while Lemon Springs, North Carolina, made gambling illegal within four hours after eating onions or garlic.

The focus of this paper is on gambling and the law. Attention below is given to movements for legalization of gambling.

## THREE WAVES

We are in the midst of what has been called "the third wave of legalized gambling" to sweep the nation. This phrase was coined by Professor I. Nelson Rose in a *Fordham Urban Law Review* study.[6] The first wave was from our colonial era through the Civil War. The lotteries, private as well as public, were features of this period. As early as 1612, the Virginia Company sponsored a lottery to offset expenses of colonization.[7] As America was colonized, the popularity of the lottery grew. One author wrote that "the thirteen colonies were virtually floated on lotteries." Benjamin Franklin, George Washington, and Thomas Jefferson each sponsored private as well as government lotteries. Jefferson called lotteries a "salutary instrument wherein the tax is laid on the willing only."[8] Revenue generated by lotteries helped to finance the Revolutionary War. Harvard, Princeton, and Columbia Universities benefited from lotteries.[9] Early state governments utilized lotteries as alternatives to taxation. In 1831, eight states ran 420 lotteries, selling over $66 million in tickets. This figure represented an amount of money five times as great as the federal budget of that time. But scandals and swindles became prevalent in the lotteries, and coupled with a wave of morality that swept the nation, most were soon abolished. In 1833, Pennsylvania, Massachussetts and New York ended their lotteries. By the Civil War, all but three states had declared the drawings to be illegal."[10]

The "first wave" encompassed other forms of gaming as well. As mentioned, the first legally sanctioned horse race with permissible betting occurred in New York in 1665.

---

**A paper read at the Western Society of Criminology, Annual Meeting, Reno, Nevada, February 23, 1985.*

***William N. Thompson is Associate Professor of Public Administration, Department of Management, College of Business and Economics, University of Nevada-Las Vegas.*

There were horse races in Virginia as early as 1674. Virginia, Maryland and New York were the strongholds of horseracing in the eighteenth century. Racing activity abated during the Revolutionary War as all available horses were called into military service. But as the independent nation grew, racing was reestablished in full vigor. Kentucky gradually emerged as the racing center of the South.[11]

Horseracing was a "gentleman's sport" during the first wave. Most gambling activity involved bets between individuals. While the lotteries of this era had died out before the Civil War, it was the war itself that ended horse racing activity in most jurisdictions — for a short time, anyway,[12]

Following the Civil War, a second wave of legalized gaming saw the lottery and horseracing revived. This comeback was most prevalent in the South as states sought mechanisms to cope with extreme financial difficulties. However, the wave of lottery activity did not persist long. Only a Louisiana lottery remained after 1878. This notorious lottery which was authorized by the state Legislature, was promoted by bribery and run by a New York syndicate. It became the subject of a federal campaign to abolish all lotteries forever. With its position as a public monoply, the Louisiana lottery enjoyed great success with sales of tickets throughout the nation. Federal pressures were exerted through the Post Office Department. In 1890 Congress gave the Postmaster General authority to refuse delivery to lottery agents; and in 1895, a bill was passed prohibiting the use of all forms of interstate commerce to lottery companies. This effectively cut Louisiana off from its market. The lottery was doomed.[13]

After the Civil War horserace activity changed. Large sums of money were invested in racetracks and breeding.[14] An industry was developing. Betting was no longer a "man-to-man" proposition as auction pools and bookmaking dominated track action.[15] Racing prospered into the late 1800s until these forms of gambling led to repeated scandals, and a new spirit of reform swept America with the Populist and Progressive Movements. States began to repeal laws allowing horserace betting.[16] By 1900 only three states, New York, Maryland and Kentucky, allowed betting. New York stopped the gambling in 1910. The wagering survived in the other two states only because of the development of a new form of betting — the parimutuel system.[17] When Nevada outlawed casinos in 1911, the parimutuels of Maryland and Kentucky were the only legal betting operations in the United States.[18]

The thirties saw the return of casinos to Nevada and the return of horserace betting with the parimutuel system to twenty-one states. A trend of expanding such track wagering continued through the forties. Other states legalized charity bingo games in the fifties, and Florida permitted parimutuel betting on jai-alai games.[19] Lotteries, however, were not given a legalized status until New Hampshire passed a sweepstakes law in 1963. The initiation of the lottery in the Green Mountain state in 1964 ushered in the third wave of legalized gaming in America.

Since 1964, twenty states and the District of Columbia have followed New Hampshire and created public lotteries. Most of these jurisdictions now run "numbers" games as well. Forty-two states plus the District of Columbia have legalized charity bingo. Horserace betting is permitted in thirty-six states, and off-track betting in three states. Parimutuel dog race betting is legal in fourteen states, and betting on jai-alai in four states. Card betting rooms are legitimate in five states.[20]

In November 1973, Brendan Byrne was elected Governor of New Jersey. Almost at once he endorsed casino gambling for Atlantic City as a means of reviving an economically devastated resort area. Gaming was to be the key to revitalizing a tourist and convention center.[21] The 1974 state Legislature cooperated by considering several propositions for establishing casinos. With the support of Byrne, Public Question Number One was put on the ballot. The proposed constitutional amendment authorized state-run casinos in locations selected by the Legislature. Voters of cities and counties would also have to approve the locations. Revenues from the casinos would be paid into the general fund of the state.[22]

Opinion polls taken as late as October 1974 showed the proposition passing with a comfortable margin.[23] Nevertheless, the opponents were able to turn that support around as the voters defeated the measure by a vote of 1,202,638 to 790,777, a 3-2 margin.[24] Several factors were identified to explain the vote. Foremost in the minds of many voters was a fear that casinos could be located in their own communities. The Governor said he favored casinos only in Atlantic City, but the ballot question left the location situation open.[25] These voters saw crime coming to their communities as casinos would be magnets for "loansharks, call girls, swindlers, and organized crime figures."[26] In one northern county, 100 miles from Atlantic City, a group of 17 clergymen signed a statement expressing apprehension that casinos "could mushroom throughout the state with no hope of abolishment ever."[27] Opponents also attacked the idea of having the state risk large sums of investment capital in the construction and operation of casinos.[28]

While proponents of casinos spend almost one half million dollars on their campaign, they were not able to enlist widespread support from the political leaders of the state. The Governor was not prominent in the campaign. On the other hand, with the strong support of the attorney general and other law enforcement officials, as well as leaders of the horse racing industry, the opponents were led by major religious figures in the state. They spend only $30,000, but they spent it effectively in convincing the voters to reject casinos.[29]

Given the uneven amounts of money used in the campaign, the opponents saw the results as an indication that the casino issue was dead. When it came up again, they took a rather nonchalant attitude toward the campaign. One church leader casually wrote off the proponents of casinos by saying "no amount of money could match hundreds of sermons from church pulpits.[30] He was wrong.

While the 1974 defeat "caused city leaders to sink into a mental depression," Atlantic City interests quickly regrouped.[31] They analyzed the results and changed their strategy. The question the Legislature put on the 1976 ballot was different. This time New Jersey voters were asked to approve private casinos which would operate only in Atlantic City. This time tax revenues would be utilized to reduce property taxes and utility bills for senior citizens; and a special tax would be devoted to urban renewal projects in Atlantic City.[32]

While the opposition slept — they spend only $21,250 on the 1976 campaign — the proponents went into high gear. They organized and hired a political media specialist to run the campaign.[33] Over $1,300,000 was raised and spent in the effort. Large sums of money were contributed by potential casino owners. Resorts International Corporation contributed $350,000.[34] Political leaders stepped forward to endorse the proposition. The governor gave his strong support.[35] The attorney general fell into a neutral silence. The horseracing industry was also silent.[36]

Those supporting casinos emphasized the economic benefits of the proposition, and they indicated that casinos would be strictly controlled in order to prevent influence from organized crime. Between 1974 and 1976, an economic depression which afflicted Atlantic City, grew worse. The state of New Jersey faced a budgetary crisis that was resolved only by instituting a state income tax in 1975. These economic realities gave the proponents an initiative ~~that~~ was not countered by the opponents' weak campaign which emphasized the immorality of gambling.[37] The ballot measure passed by a vote of 1,535,249 to 1,180,000.[38] Atlantic City was in business again.

## PREDICTIONS OF A CREST: RESULTS

When casino gambling was endorsed in the 1976 New Jersey referendum vote, it appeared to many observers that the "third wave" of legalized gaming in America was still approaching its crest. It was predicted that the "wave" would soon bring a flood of casino legalizations across the land. This did not happen. Casinos are legal in Nevada and New Jersey — nowhere else.

The spread of gaming legalizations in this "third wave" era has been called "gambling fever."[39] Gaming has been labeled as "America's Newest Growth Industry."[40]

According to *Changing Times* (1977):

> Clearly for a majority of people, gambling no longer carries a social taint. More kinds of gambling are widely accepted than ever before. . . . The reasons are simple: people believe it to be a harmless activity; the state itself approves; others do it; it's thought to be a way to reduce illegal gambling; the tax money, supporters contend, will provide a bonanza to the state treasury.[41]

Nationwide polls have shown majority support for most forms of gambling. A 1975 poll was conducted by the University of Michigan for the Commission on the Review of National Policy on Gambling. The survey found that 68% of the national sample approved of legalized bingo, 61% approved of lotteries, and 62% approved of horserace betting. Forty percent gave approval to the legalization of casino gambling.[42] A 1982 Gallup Poll was sponsored by *Gaming Business Magazine*. The Magazine loudly proclaimed that the results were a "landslide for gaming." The poll found 68% agreeing with the statement that they would rather see legalized gambling than a rise in state taxes. Bingo support climbed to 74% and lottery support to 72%. A nationwide majority of 54% approved of off-track horserace betting. For the first time, a majority (51%) indicated that they supported casino legalizations. Casinos were supported mostly by men (55%), younger adults (55%), and Easterners (63%).[43] A 1984 Gallup survey also for *Gaming Business Magazine* showed continued support for gaming, although some of the approval levels fell. In 1984, 66 favored legalized gambling over tax increases. The survey also demonstrated support for a nationwide lottery. However, casino support fell to 44%. Majority sentiment for casinos remained in the East (56%) and West (51%), among men (50%), and for the first time among college educated respondents (51%).[44] In each poll the respondents were asked if they had participated in casino gambling during the previous year. The proportions saying "yes" grew from nine percent in 1975 to 13% in 1982 and to 18% in 1984. The public was becoming more actively involved in gambling endeavors.

With this kind of popular sentiment favoring gaming, authoritative sources predicted a continuing crest for the "third wave." The Public Gaming Research Institute published predictive surveys in 1980, 1981, 1982, and 1983.[45] The predictions contained in the four reports were based upon several hundred telephone calls to legislators and public executives in all fifty states. The Institute also examined a set of over twenty factors which were believed to be related to the success of legalization efforts. These factors included the methods of change required for legalization, existing legalization of gaming in the state, the policy positions of public leaders, religious and social bias of the state, potential tourism benefits to the state, proximity to other states with gambling, funding for support of gaming, funding for opposition forces, the economic conditions of the state, the reputation of gaming in the state and public sentiments. The Institute presented plus and minus scores for each factor. A preponderance of positive points led to predictions for gambling. Many of the predictions were quite accurate, but others only missed the dates of legalization. Some were not accurate.

The 1980 predictions foresaw lotteries in an additional ten states by 1985, with nine more states slated by 1989. Seven of the ten (1985) predictions were on target. An additional two states also legalized lotteries. One (Arizona) was on the long term list; another, West Virginia, was not.

In 1980 the Public Gaming Research Institute correctly identified Iowa and Minnesota as horseracing states for the near future. It failed to predict Missouri, or Alabama, and predicted Oklahoma for the long range future. Two predictions for early tracks (Indiana and Alaska) were not accurate. In 1981, four of the five new horseracing states were accurately identified (Minnesota, Oklahoma, , Iowa, and Missouri) and one (Alabama) was not. Three states were placed in the long range category.

For casino predictions, the results have been anything but close to accurate. In the 1980 report, nine states were predicted to have casinos by 1985. Another nine states would have casinos by 1989. None of the eighteen has legalized casinos as of 1985. The 1982 list suggested that eight states would have casinos by 1985, and an additional nine by 1989. In 1982 casinos were still predicted for Massachusetts (1982), New York (1983), Connecticut (1984), and Michigan and Pennsylvania (1985). A more sobering look in 1983 merely suggested that Michigan and Illinois were the only viable prospects.

It would be unfair to concentrate on a criticism for predictive inaccuracies on the Public Gaming Research Institute. On the one hand, it has been reasonably accurate in its predictions of future lottery and horseracing states. On the other hand, it has had plenty of company in missing the target on casinos. Walter Tyminski wrote in a 1978 *Gambling Times* article, that "Informed observers see an explosion of interests in casino gambling as additional states bless the industry with votes of confidence."

Robert Shawn, Vice President of Economic Research Associates, wrote early in 1980 that casino expansion into New York and Pennsylvania was favorable within two to three years with mixed chances for casinos in Massachusetts and Connecticut.[46]

In 1980 Lee Isgur, Vice President of Paine, Webber, Mitchell, Hutchins, Inc., wrote, "Over the next four to five years, I think that we will have at least two more states in the United States which will legalize gaming. Over the next decade, I believe anywhere from 10 to 20 states will legalize gaming."[47] His sentiments were echoed in the works of Victor Lownes, former president of Playboy Clubs International, "As moral attitudes toward casino gaming change, no state is going to sit idly by and watch millions of dollars earned at home drift to neighboring states. Ultimately, I foresee that casino gaming will come to practically every state in the union."[48]

## EXPLANATIONS: FACTORS REJECTED

We have viewed the predictions and the results. A "third wave" of gambling fever certainly has been cresting across America. However, it is time that we reexamine the wave. We need to take a closer look at the campaigns and elections for legalized gambling. When we do so, we will discover that there is no monolithic wave of gaming legalizations. Rather, there are many facets to the "wave." There is a variety of ways that voters respond to legalization campaigns. Voters approve some forms of gambling while almost simultaneously disapproving other forms. We must attempt to explain this variation in responses.

This effort is not the first collective examination of campaigns for the legalization of variable forms of gambling. Kathleen Joyce explored the relationship of public opinion polls to campaign results in a study for the special gambling edition of the *Journal of Social Issues* in 1979.[49] She revealed quite clearly that the public was fickle in the way it treated gaming questions. Her findings are confirmed in the campaign results since she made her study. In Tables 1 to 5, election and campaign results for lottery, horseracing and

TABLE 1

**PREDICTIONS FOR LOTTERY LEGALIZATIONS: PUBLIC GAMING RESEARCH INSTITUTE REPORTS**

| STATE | 1984 REPORT | 1981 REPORT | 1982 REPORT | 1983 REPORT | RESULTS 1985 |
|---|---|---|---|---|---|
| California | 1984 | 1985 | 1983 | Yes | Passed 1984 |
| Colorado | 1980 | 1982 | — | — | Approved 1982 |
| District of Columbia | 1982 | — | — | — | Approved 1982 |
| Indiana | 1983 | 1985 | 1984-1987 | No Mention | No Lottery |
| Iowa | 1981 | 1985 | No | No Mention | No Lottery |
| Missouri | 1982 | 1983 | 1984-1987 | No Mention | Passed 1984 |
| Nebraska | 1981 | 1985 | 1984-1987 | No State Lottery | Local Lotteries Established |
| Oregon | 1983 | 1985 | 1983 | No Mention | Passed 1984 |
| South Dakota | 1984 | 1984 | No Mention | No Mention | No Lottery |
| Washington | 1983 | 1985 | — | — | Approved 1982 |
| Kentucky | No Mention | 1984 | No Mention | No Mention | No Lottery |
| Alabama | No Mention | 1985 | No Mention | No Mention | No Lottery |
| Florida | No Mention | 1985 | 1983 | People Favor | No Lottery |
| New Mexico | No Mention | 1985 | No Mention | 1983 | No Lottery |
| Hawaii | No Mention | No Mention | 1983 | No Mention | No Lottery |
| West Virginia | No Mention | No Mention | 1984-1987 | 1984 | Passed 1984 |
| Virginia | No Mention | No Mention | 1984-1987 | No Mention | No Lottery |
| Oklahoma | No Mention | No Mention | 1984-1987 | No Mention | No Lottery |
| Nevada | No Mention | No Mention | 1984-1987 | No Mention | No Lottery |
| Minnesota | No Mention | No Mention | 1984-1987 | No Mention | No Lottery |
| Arkansas | No Mention | No Mention | 1984-1987 | No Mention | No Lottery |

casino campaigns are presented. Much is left to explain. We must explain why all but one casino campaign failed in the face of so many predictions for expansion of casino gambling. At the same time we must be able to explain the almost opposite phenomenon of campaign successes for lottery and horseracing issues, successes that were to some extent predicted. Why the differences?

On earlier pages, the successful 1976 New Jersey casino campaign was contrasted with the unsuccessful casino campaign of 1974. Perhaps the lottery and horseracing campaigns have features very similar to those of the 1976 campaign, while *other casino* campaigns more closely paralleled the 1974 New Jersey effort. Let us look at elements of these campaigns.

TABLE 2

**PREDICTIONS FOR HORSERACE BETTING: PUBLIC GAMING RESEARCH INSTITUTE REPORTS**

| STATE | 1980 REPORT | 1981 REPORT | 1982 REPORT | 1983 REPORT | RESULTS 1985 |
|---|---|---|---|---|---|
| Alaska | 1983 | No Mention | No Mention | No Mention | No Racing |
| Indiana | 1982 | 1989 | No Mention | No Mention | No Racing |
| Iowa | 1983 | 1989 | 1984-1987 | — | Approved 1983 |
| Minnesota | 1983 | 1985 | No Mention | — | Passed 1982 |
| Oklahoma | 1989 | 1989 | No Mention | — | Passed 1982 |
| Texas | 1989 | 1989 | No Mention | 1985 | No Racing |
| Virginia | 1989 | 1989 | No Mention | No Mention | No Racing |
| Connecticut | 1989 | No Mention | No Mention | No Mention | No Racing |
| Missouri | No Mention | 1989 | 1984-1987 | No Mention | Passed 1984 |
| Alabama | No Mention | No Mention | No Mention | No Mention | Passed 1984 |
| Wisconsin | No Mention | No Mention | 1984-1987 | No Mention | No Racing |

TABLE 3

**PREDICTIONS FOR CASINO LEGALIZATIONS: PUBLIC GAMING RESEARCH INSTITUTE REPORTS**

| STATE | 1980 REPORT | 1981 REPORT | 1982 REPORT | 1983 REPORT | RESULTS 1985 |
|---|---|---|---|---|---|
| Connecticut | 1981 | 1985 | 1984 | No Mention | No Casinos |
| Louisiana | 1982 | 1985 | 1984-1987 | No Mention | No Casinos |
| Maryland | 1984 | 1989 | No Mention | No Mention | No Casinos |
| Massachusetts | 1981 | 1982 | 1982 | No Mention | No Casinos |
| Michigan | 1983 | 1983 | 1984-1987 | 1985 | No Casinos |
| New Hampshire | 1983 | 1983 | No Mention | No Mention | No Casinos |
| New York | 1981 | 1983 | 1984-1987 | No Mention | No Casinos |
| Pennsylvania | 1982 | 1985 | 1984-1987 | No Mention | No Casinos |
| Rhode Island | 1983 | No Mention | No Mention | No Mention | No Casinos |
| Arkansas | 1983 | 1989 | No Mention | No Mention | No Casinos |
| California | 1983 | 1989 | No Mention | No Mention | No Casinos |
| Colorado | 1983 | 1989 | 1984-1987 | No Mention | No Casinos |
| Delaware | 1983 | 1989 | No Mention | No Mention | No Casinos |
| Florida | 1983 | 1985 | 1984-1987 | No Mention | No Casinos |
| Hawaii | 1983 | 1989 | No Mention | No Mention | No Casinos |
| Illinois | 1983 | 1989 | 1984-1987 | Possible | No Casinos |
| Oregon | 1983 | 1989 | No Mention | No Mention | No Casinos |
| Washington | 1983 | 1989 | No Mention | No Mention | No Casinos |

## TABLE 4

## PUBLIC ELECTION CAMPAIGN RESULTS

| LOTTERIES | | HORSERACING | |
|---|---|---|---|
| New Jersey 1969 | Passed, 81% | Arkansas 1956 | Passed, 53% |
| Virginia 1970 | Passed, 63% (Not Implemented) | Indiana 1968 | Failed, 47% |
| Washington 1972 | Received 62% (Insufficient for Passage) | New York (O.T.B.) 1963 | Passed, 76% |
| Iowa 1972 | Passed, 67% (Not Implemented) | Missouri 1971 | Failed, 46% |
| Michigan 1972 | Passed, 73% Oklahoma 1974 | Failed, 46% | |
| Maryland 1972 | Passed, 77% | Texas 1974 | Failed, 45% |
| North Dakota 1972 | Passed, 58% (Not Implemented) | Virginia 1978 | Failed, 48% |
| Maine 1973 | Passed, 72% | Oklahoma 1982 | Passed, 58% |
| Ohio 1973 | Passed, 64% | Minnesota 1982 | Passed, 58% |
| Rhode Island 1973 | Passed, 76% | Missouri 1984 | Passed, 60% |
| Missouri 1984 | Passed, 68% | | |
| California 1984 | Passed, 58%[6] | | |
| Oregon 1984 | Passed, 53% and 66% | | |
| West Virginia 1984 | Passed, 66% | | |

## TABLE 5

## CASINO CAMPAIGN PREDICTIONS AND RESULTS

| CAMPAIGN | PREDICTION | CAMPAIGN RESULTS |
|---|---|---|
| New Jersey 1974 | — | Election Defeat; 40% Support |
| New Jersey 1976 | — | Election Victory; 56% Support |
| Florida 1978 | Late 80s | Election Defeat; 27% Support |
| Florida 1982-84 | Late 80s | Petition Drives Fail |
| Massachusetts 1978-82 | 1981 | Legislative Defeat |
| Connecticut 1979-83 | 1981 | Legislative Defeat |
| New York 1977-84 | 1981 | Legislative Defeat |
| New Hampshire 1979-80 | 1983 | Legislative Defeat |
| Pennsylvania 1977-84 | 1982 | Legislative Defeat; Advisory Vote Defeat; 20% Support |
| Michigan 1976-81 | 1985 | Legislative Defeat; Advisory Vote Defeat; 37% to 40% Support |
| Texas 1984 | No Casinos | Advisory Vote Defeat; 42% Support |
| Arkansas 1964 | Late 80s | Election Defeat; 34% Support |
| Colorado 1960 | — | Petition Drive Disqualified |
| Colorado 1982 | Late 80s | Petition Drive Disqualified |
| Colorado 1984 | Late 80s | Election Defeat; 33% Support |

1) **Campaign Issues.** The 1974 campaign in New Jersey concentrated on the issue of crime. The 1976 campaign emphasized economic development. Perhaps campaign issues can explain the different results. Perhaps not! The same economic atmosphere surrounds all kinds of gambling issues: unemployment, inflation, high taxes. These factors pushed lottery advocates, casino advocates and horseracing advocates to advance their causes. In every jurisdiction the call was the same: "Legalize gambling and help the economy." Also, the opponents in every jurisdiction cried, "Gambling brings criminal activity."

In the 1930s, Governor James Allred of Texas attacked horseracing on moral grounds. "[I]t is unquestionably one of the greatest moral problems ever before the people. Since it is, let us accept the moral leadership of our ministers. Let us go along with the few who have heeded the call to preach the gospel to every creature."[50]

Reverend James Dallas of the San Dieguito United Methodist Church equated the California lottery question with Las Vegas gambling. "Organized betting on the scale of Las Vegas, (and I know about that, having lived in Nevada) is something else. It's a front for organized crime, drugs and prostitution. Moreover, it encourages a philosophy of getting something for nothing and titillates many of our human weaknesses. The rippling effects of street crime and social problems are enormous. Proposition 37 on the ballot proposes to establish a lottery ostensibly to support education. True, it's not 'wagering' Las Vegas style but it's a massive gambling program that has all of Las Vegas' negative aspects. In spite of the occasional 'winners,' the losers and the losses as mentioned above are overwhelming."[51]

The issues were the same for all the campaigns. The difference is that the public has been more willing to hear the economic arguments in the lottery and horseracing campaigns. The crime and morality issues dominated all the casino campaigns except the 1976 New Jersey campaign.

2) **Major actors in the campaigns.** The attorney general, horsetrack interests and churches opposed New Jersey casinos in 1974. In the 1976 casino campaign, the opposition was confined to church groups. The Governor and other key political leaders supported casinos. We can ask if this pattern explains why other campaigns succeed or fail. Have governors and key interests supported lotteries and horseracing while opposing casinos? Not exactly!

In case after case casinos have been opposed by governors and attorneys general. Governor Askew and Graham led the successful charge against casinos in Florida. Governor Lamm did the same in Colorado, Galen in New Hampshire. New York Attorney General Robert Abrams' Report on Casino Gambling in 1981 was a critical factor in stopping casinos in the Empire State.[52]

But governors and attorneys general have been equally apparent in several of the campaigns against lotteries and horseracing, with opposite results. The California Governor and attorney general opposed the lottery in 1984. It passed with a majority approaching 60%. The Governor of Minnesota opposed the horseracing proposition in 1982. It passed with a comfortable margin. Horseracing interests have opposed casinos in places other than New Jersey, for instance, in Florida and Michigan. They have been successful in gaining the results they desired. However, they also opposed the lottery in California. The participation of key political actors and interests in gambling campaigns is insufficient to explain the results of all the campaigns.[53]

3) **Campaign funding.** The 1976 New Jersey casino campaign showed that money talks. Is money the element that explains why lottery issues and horseracing issues succeed while casino votes generally fail? Not really.

In the 1974 New Jersey casino campaign, the proponents greatly outspent the opponents, (16 to 1), yet they were defeated. In 1978, the Florida casino proponents spent nearly $2 million. Their funds were equally matched by the opponents' treasury, but they received only 29% of the vote. In almost all of the other casino campaigns, the opponents outspent the casino supporters. The results were predictable. Did campaign financing explain the results of lottery and horseracing campaigns? Not in all cases. Opponents of lotteries and horseracing have often outspent the successful proponents. The campaigns for horseracing in Oklahoma and Minnesota were dramatically underfunded. One Minnesota source claimed that the horseracing proponents spent only $24,000 on their "low key" but successful campaign.[54] We must search for other answers.

4) **The polls.** We may find some explanation for the differing results by examining the polls. But on the surface the polls have not tapped sentiments showing vastly different public attitudes toward different forms of gambling. Overall, polls have shown overwhelming support for horseracing and lotteries. But many polls have also shown public support for casinos. The polls taken before the 1974 New Jersey vote and the 1978 Florida vote indicated that casino issues would pass by safe margins. They lost by large margins.

## EXPLANATIONS ACCEPTED

What then are the explanations for the variations in public responses to different forms of gambling? We have identified several explanations. First, we will start by taking a closer look at the polls.

1) **Another View of the Polls.** While the polls may on the surface suggest that sentiment is in favor of all kinds of gaming, we should be careful in accepting such an interpretation. On the one hand, polls showing that casino issues would pass have been wrong. Why? The pollsters may be asking the wrong questions. They may be asking the wrong people. Respondents to questionnaires do not have an opportunity to make in-depth answers based upon reflective thought. They do not have an opportunity to witness the parade of campaign forces and materials before they give their answers. Their answers are often directed at hypothetical quesitons. In 1975, there were few active campaigns for casinos; there were no electoral campaigns. By 1982 and 1984, most serious efforts to establish casinos in new states had stalled. Respondents were not giving answers to realistic questions. But when the respondents could vote, they voted on concrete proposals. They voted on casino questions that

could have affected their home communities. They voted on casino issues after they had been barraged with information. As voters moved from the hypothetical to the concrete, their opinions on the issue moved away from the positive and toward the negative.

The respondents to the casino polls may not have been the most likely people to turn out and vote on election day. The national polls showed that younger people favored casinos and older people opposed them. In general, the older population demonstrates a greater likelihood to *vote.*

In comparing various kinds of gaming, we should recognize that the polls did show greater strength for horseracing and lotteries. In fact, the polls indicate that these forms of gaming begin campaigns with overwhelming (over 60%) public approval. Campaigns can gather resources and endorsements and momentum when they are able to demonstrate majority sentiments in the early stages. The nationwide polls on casinos show only marginal majority support. At no time was there majority support among all regions and among all age groups. In 1975 and 1984, there were only pockets of majority support; overall, the majority opposed casinos. Casino campaigns, therefore, have to start out with negative sentiments as strong or almost as strong as positive sentiments. In such a milieu, the addition of gubernatorial and other political opposition can make ultimate passage possibilities extremely remote. Where sentiments produce polling responses of 60% or greater support for lotteries and horseracing, the effects produced by the opposition of key political actors will be much less.

2) **Traditions of Public Acceptance.** Campaigns for casinos are at a disadvantage compared with those for lotteries and horseracing because of historical acceptance of the latter forms of gaming. They have a position of familiarity in our national culture and positive associations in the public mind. Lotteries also have a format similar to raffles that are widely accepted. The lottery was eliminated as a national phenomenon because of the abuses of the private managers of the Louisiana lottery. The six decade hiatus between the demise of that raffle and the establishment of the New Hampshire sweepstakes removed from our public consciousness the notion of corruption in lotteries. Since 1964, there have been problems with state lotteries, but scandals have been minor and few in number. A drawing was rigged in Pennsylvania but the perpetrators were caught. Bidding procedures for state lottery contract work have been challenged in some jurisdictions. However, overall, the enterprise has been clean, and it has in most places produced revenues anticipated. The emerging picture of state-owned, state-run, efficient, honest lotteries is a welcome picture for proponents of new state lotteries.

Horseracing has also been a prevalent social institution throughout American history. The horse provided the primary means of transportation in America into the twentieth century. Many people owned horses, and they engaged in matching the speed of their horses against those of their neighbors. Commercial racing was an activity with which they could personally relate. Commercial racing was first sanctioned in 1665 in New York. As the commercial enterprise flourished, a horsebreeding industry developed. Leading national figures, such as George Washington, Thomas Jefferson and Andrew Jackson, engaged in racing horses and breeding horses.[55] As the entire population needed horses, the industry became a favored one. The nation soon accepted the belief that horserace betting was an activity that protected and promoted the breeding industry. The notion persists today. It gives a special legitimacy to horseracing that other forms of gambling do not have. Also, persisting is the idea that horseracing is a sport and that betting on horseraces is not gambling but a reasoned exercise in applying certain skills. There are many horseraces where there is no organized betting. And the terminology of horserace betting is indicative of this view: betting is "handicapping," and horseracing forms and charts are detailed, complex and confusing to the outsider.

As the racing industry developed, there were problems and there have been scandals. But efforts to implement control systems have lessened public concern to a degree. Horserace betting changed radically with the development of parimutuel betting and the totalizator in the late 1800s.[56]

Bookmakers came to dominate the betting at races starting in the 1870s, but they soon tarnished the image of the sport. Fred S. Buck wrote: "Under the dominance of bookmakers, many of whom were either unscrupulous or downright dishonest, racing had reached such a low estate that its eventual death seemed to be in sight. Honest men who looked down upon racing as a sport, and breeders who were sincerely interested in improving the breed, hailed the parimutuel system as the savior of racing. They became crusaders against the bookmakers, using the parimutuel system as their sword of battle."[57]

The totalizator machine and its computerized offsprings have allowed the parimutuel system to come into its own and grow. Bettors now create a pool among themselves with their bets. The track operators and the state take a share (usually under 15%). The house (track), therefore, is not a bettor. As with the lottery, the "house" only holds the money for a fee. Therefore, operators of the betting system have no incentive to rig races. This incentive is not entirely removed for bettors, however.

The state has taken over many operational facets of horseracing and horserace betting. In some places, they actually run the betting system. In others, they always have officials at the betting scene. The state also performs functions in the management of racing events. Additionally, the racing industry has created associations that operate nationwide to assure the public that horseracing is legitimate. Horse registers are kept and racing matches are developed that will be competitive contests. The racing associations have existed for nearly a century and are respected as appropriate controlling agencies.[58]

Unlike lotteries and horseracing, casinos have never been accepted as benefactors of society. Casinos, too, have existed during most of our national history, but their operations more often than not have been illegal. Often the operators have been associated with organized crime.

The stories of casinos in American history have been stories of conscious efforts of an industry to cheat its patrons. The industry flourished on the nation's frontiers where law enforcement institutions were not strongly established and in certain urban centers where law enforcement was regularly compromised through machine politics and political corruption.[59] Mississippi riverboat operators could dodge local authorities by traveling up or down the river. Such movements would protect the activity of gamblers who were notorious for cheating customers. The editors of *Time-Life Books* wrote: "All riverboat gamblers were expert at cheating, and perhaps 99 percent of them *did* cheat. One authority on the subject, who estimated that there were at least 2000 gamblers on the western waters in the mid 19th century, could think of only four who were honest."[60] Such was the legacy of casino-type gambling. Before legalization in Nevada in 1931, there was no organized concern about the honesty of the casino games, and even today there are questions about the effectiveness of government controls over casinos. Casinos are privately owned and privately operated. Betting activity is conducted between the house and the player. This gives the house considerable incentives to make the odds of the games unfavorable to the players. Modern casinos, however, are content to offer players very attractive (but never even) odds, and then let the volume of play create the house fortune.

3) **Investments and Risks.** The three institutions of gambling, lottery, horseracing and casinos, vary in many other ways. The state may expect to gain revenues from each form by taking its share or through taxes. But the state must incur risks with legalizations. States must control and administer the gaming activities. Expensive controls must be in place before gaming begins. The burden of lottery regulation is less than that for the other forms of gambling. Horseracing regulation is not as costly as casino regulation. Some private companies will offer to start and operate state lotteries for a fee (a small percentage).[61] The state may not have to advance any money. In contrast, before casinos start operating, hundreds of state employees must be hired to investigate the backgrounds of potential casino operators. Once operating, casinos need regulation that costs millions: $38 million in New Jersey, $10.5 million in Nevada.[62]

The risks of the games are even greater to the establishments. Lotteries may be established at little cost to the state. Racetracks and betting operations may cost millions of dollars to build. A recently constructed Colorado track cost $30 million.[63] Casinos by comparison have astronomical costs. Resorts, International came to Atlantic City with a $77 million price tag. Bally's Park Place cost over $300 million.[64] The cost of other New Jersey casinos ranged between these extremes. Nevada permits the operation of smaller casinos, so price tags range from a few million dollars to the higher figures of New Jersey. The Boyds of Las Vegas just purchased the Fremont and Stardust for a combined price of $178 million.[65]

While the state does not incur direct risks with investments, it does have risks. The casinos by virtue of their large investments must take all means feasible and responsible to make sure their investments are safe. This usually means that the gaming establishments have a strong incentive to develop good relationships with politicians, or better yet, to gain a controlling interest over the politicians. States have to consider the possible loss of some control over their policy processes when casinos come into their midst. Horsetracks must, of course, be concerned about state policy, but the investments they have at risk are minor in comparison.

Along with their expensive plants, casino operations require large numbers of people. This is offered as a major positive factor for legalization. Horsetracks also create many jobs but a large number of these jobs is seasonal. The lotteries have small employment needs, although ticket agents may receive good commissions for their activity. The positive impact of employment can be reversed for casino states. The state has to be reluctant to interfere with facilities which have such large scale employment, because they fear that the employment might be threatened with devastating consequences to local economies. The control of casinos then is hampered by a bias to keep them open at all costs.

4) **Effects on Community Life.** The concentration of "action" in one location also sets casinos apart from lotteries and horserace betting. Casinos cannot escape being part of the community. Horseracing tracks are few in number and because of space needs are distant from most residential areas. The lottery is a diffuse operation that penetrates the community, but it has minimal effect over the flow of community life. Horseracing and lotteries are also time-bounded activities. Races are held during a racing season. There is a limited number of races each race day. Lotteries, except for the instant format, are daily, weekly, or special drawings. Casinos offer constant gaming activity — 24 hours a day in Nevada, 18 hours a day in Atlantic City. The heavy action in one location causes a concentration of people, a number of whom present social problems to the community. Thieves, prostitutes and drug merchants are drawn to casino centers. So, too, are compulsive gamblers. These elements are not drawn to lotteries; and where they are drawn to horsetracks, they disperse when the event is completed. They persist around the casinos and become a permanent part of casino communities. To be sure, their antisocial activity can be controlled but cannot be stopped entirely.

But casinos do more than attract bad elements to a community. They also penetrate an existing community and contribute to the overall quality of life in a community. This certainly has good features. Casinos' payrolls contribute to general prosperity. Las Vegas gives great emphasis to portraying itself as a "family town" and a "town with more churches" per person than any other city. But the ambience of a casino environment can belie all the attempts of city fathers at image building. In 1984, amidst great fanfare, the city welcomed the decision of a major corporation, Citicorp Bank, to locate facilities in Las Vegas. In 1985, the city learned that the corporation will not include the name *Las Vegas* in its mailing address. Another company located its new facilities in the suburb of Henderson, Nevada, specifically so that it would not have the name Las Vegas on its address.

Atlantic City suffered much criticism a few years ago when a study revealed that teenagers frequently entered the casinos and played all the games offered. High school students loitered around the casinos.[66] The state responded to the challenge with greater security efforts and by raising the gambling age from 18 to 21. Nevada has pretended that there were no such problems in Silver State casinos. The age for gambling has always been 21. Yet contrary stories are often told. A student newspaper at one prominent high school reported in one of its 1985 issues, "Casino gambling is alive and flourishing at Bishop Gorman High School, according to some sources: gambling that even involves some teacher/student connections. One senior boy, who declined to be named, stated 'I'd say that about twenty-five to thirty percent of the guys in the junior and senior class gamble regularly at casinos here in town. They either take the money themselves or give it to a teacher.'"[67]

## A LAST WORD

Casinos are different. People like gambling and they want casinos to exist. But they do not want casinos all the time, and they do not want casinos in their own home towns. Most Americans gamble and have a desire to gamble. But statistics show that only a few have a constant need to gamble. Only a few are compulsive gamblers.[68] A lottery, bingo games, horsetracks — the existence of these probably satisfies the general population's "need" to gamble on a regular basis. The type of gaming witnessed in casinos is probably viewed by most as a vacation or recreation time activity to be engaged in only at widely spaced intervals in time. The existence of regional gaming centers in Nevada and Atlantic City is enough to satisfy the general public's desires for casino gambling. For the reasons identified, we should conclude that the "third wave of gaming legalization" to hit America does not include casinos and is unlikely to include casinos as it continues to crest across the land.

---

***Footnotes:***

[1] Gambling has been called "the second oldest diversion." David Newman, *Esquire's Book of Gambling* (New York: Harper and Row, 1962), p. 1; Alberto Caballero and Revelle B. Taylor, "The Growth of Gaming in America," *Laventhol and Horvath Perspectives*, Spring-Summer, 1977, p. 3; Hand Messick and Burt Goldblatt, *The Only Game in Town* (New York: Thomas Y. Crowell, 1976), p. 14.

[2] A.J. Berger and Nancy Bruning, *Lady Luck's Companion* (New York: Harper and Row, 1979), p. 17.

[3] John Scarne, *Scarne's Complete Guide to Gambling* (New York: Simon and Schuster, 1961), p. 533.

[4] Scarne, p. 30; and Henry Chafetz, *Play the Devil* (New York: Charles N. Potter, 1960), p. 18.

[5] R. Wayne Pelton, "Laughable Gambling Laws," *Gambling Times*, January 1980, pp. 26-28, 91.

[6] I. Nelson Rose, "The Legalization and Control of Casino Gambling," *Fordham Urban Law Journal*, 1980, p. 247.

[7] Messick and Goldblatt, p. 14; Chafetz, p. 20.

[8] Chafetz, p. 23; Berger and Bruning, pp. 14-16.

[9] Berger and Bruning, pp. 136-137.

[10] Berger and Bruning; and Ernest E. Blanche, "Lotteries, Yesterday and Tomorrow," *The Annals of the American Academy of Political and Social Science*, May, 1950, p. 72.

[11] Daniel Francis Parker, *The ABC of Horseracing* (New York: Random House, 1947), p. 11.

[12] *Ibid.*, p. 12.

[13] Rose, p. 245; and Ernest E. Blanche, "Lotteries Yesterday, Today, and Tomorrow," *The Annals of the American Academy of Political and Social Science*, May 1950, p. 73.

[14] Parker, pp. 12-13.

[15] *Ibid.*, pp. 13-14.

[16] *Ibid.*, pp. 14-15; John I. Day, "Horseracing and the Parimutuel," *The Annals of the American Academy of Political and Social Science*, May 1950, pp. 57-58.

[17] Parker, p. 15.

[18] *Ibid.*

[19] See Day, p. 58.

[20] G. Robert Blakey, "Legal Regulation of Gambling Since 1950," *Annals of the American Academy of Political and Social Science*, July 1984, p. 13; see note 45 below.

[21] John Dombrink, *Outlaw Businessmen: Organized Crime and the Legalization of Casino Gambling* (Ph.D. Dissertation, University of California, Berkeley, 1981), pp. 152-168.

[22] Charles C. Carella, "Casino Gambling," *Public Gaming Magazine*, Spring, 1975, p. 7.

[23] *Wall Street Journal*, October 21, 1974, p. 12:1; Carella, p. 21.

[24] Marea Teski, Robert Helsabeck, Franklin Smith, and Charles Yeager, *A City Revitalized — The Elderly Lose at Monopoly* (Lanham, Maryland: University Press of America, 1983), p. 16.

[25] Carella, p. 21; Dombrink, p. 156.

[26] Carella, p. 23.

[27] *Ibid.*

[28] Dombrink, p. 157.

[29] Dombrink, pp. 157-158, 170.

[30] Dombrink, p. 170.

[31] Teski, p. 16.

[32] Teski, pp. 17-18; Dombrink, p. 159; Charles Tautillo, "A Unique Tool of Urban Redevelopment: Casino Gambling in Atlantic City," a paper prepared for the Center for Urban Policy Research, Rutgers University, April 15, 1981.

[33] Dombrink, pp. 163-172.

[34] Dombrink, pp. 171-173.

[35] Dombrink, p. 159; "How Casinos Came to Atlantic City," *Public Gaming Magazine*, May, 1981, pp. 5, 7.

[36] Dombrink, p. 170.

[37] Dombrink, p. 158.

[38] Teski, p. 18.

[39] "Gambling Fever," *Changing Times*, September 1977, p. 36.

[40] "Gambling: The Newest Growth Industry," *Business Week*, June 26, 1978, pp. 110-129.

[41] "Gambling Fever," p. 36.

[42] Commission on the Review of the National Policy Toward Gambling, "Survey of American Gambling Attitudes and Behavior," Appendix 2, *Gambling in America*, (Washington, D.C.: U.S. Printing Office, 1976).

[43] Howard J. Klein and Gary Selesner, "Gallup Poll: A Landslide for Gaming," *Gaming Business Magazine*, November, 1982, pp. 5-7, 48-49.

[44] Robert Bezilla, "Gallup-GB Survey," *Gaming Business Magazine*, July and August, 1984.

[45] Public Gaming Research Institute, *Further Legalization of Gambling in the United States in the Decade of the Eighties* (Rockville, Md.: P.G.R.I., 1980; P.G.R.I., *1981 Survey Report and Forecasting on the Further Legalization of Gambling* (June 1981); P.G.R.I., *1982-83 Forecast of the Further Legalization of Gambling in North America* (July 1982); P.G.R.I., *1983-84 Forecast of the Further Legalization of Gambling in North America* (July 1983).

[46] Walter Tyminski, "The Impact of New Jersey and Other States," *Gambling Times*, April 1978, p. 19; Robert Shawn and Louise Root, "Expansion of Casino Gaming in the East," *Public Gaming Magazine*, March 1980, p. 7.

[47] "Gaming in the 80s," *Gaming Business Magazine*, February 1980, p. 24.

[48] *Ibid.*, p. 25.

[49] Kathleen M. Joyce, "Public Opinion and the Politics of Gambling,"

*Journal of Social Issues,* Number 3, 1979, pp. 144-165.

[50] Kent Demaret, *Baptists and Bangtails* (Houston: Cordovan Press, 1973), p. 63.

[51] James Dallas, Dan Dieguito United Methodist Church "Seagull," Encinitas, California, November 1984; see also "Clergymen Call Lottery 'Gamble With the Soul'," *Los Angeles Times,* October 23, 1984, I, p. 3.

[52] "Report of Attorney General Robert Abrams in Opposition to Legalized Casino Gambling in New York State," May 20, 1981.

[53] e.g., see: Paul Jacobs, "Supporters of Lottery Link Foes to Jockeys and Racehorse Owners," *Los Angeles Times,* October 4, 1984, I, p. 24.

[54] Michael P. Davis, "Minnesota, Oklahoma, and Texas," *Gaming Business Magazine,* December 1982, p. 29, see also: "Oklahoma to Permit Parimutuels in Unexpected Referendum Result," *New York Times,* September 23, 1982, p. 16.

[55] Fred S. Buck, *Horserace Betting* (New York: Greenberg Press, 1946), pp. 7-8.

[56] *Ibid.,* pp. 1-4.

[57] *Ibid.,* p. 8

[58] Marvin Bradley Scott, *Social Organization of Horseracing* (Ph.D. Dissertation, Department of Sociology, University of California, Berkeley, 1971), pp. 264-278; Buck, pp. 13-19; Day, pp. 57-61; Demaret, pp. 8-13.

[59] Samuel Grafton, "Illegal Gambling Casinos in the USA: Where the Law Ends," *Look Magazine,* October 20, 1964, pp. 124-130.

[60] Editors of Time-Life Books, *The Gamblers* (Alexandria, Va.: Time-Life Books, 1978), p. 61.

[61] One example is the installation of video lottery equipment in Illinois. Some lottery states, however, have incurred considerable costs in establishing their games. But in almost all cases, revenues have exceeded projections. The state of Washington has, however, experienced cash flow problems. *Gaming and Waging Business,* February 1985, p. 4.

[62] *Gaming and Wagering Business,* October 1984, p. 2.

[63] Terri LeFleur, "More Than Just a Track in the Mud," *Gaming and Wagering Business,* October 1984, pp. 28-29.

[64] George Sternlieb and James Hughes, *The Atlantic City Gamble* (Cambridge: Harvard University Press, 1983), p. 158.

[65] *Las Vegas Review Journal,* February 21, 1985.

[66] Teski, p. 13.

[67] *The Lance,* Bishop Gorman High School, Las Vegas, February 1985.

[68] Henry R. Lesieur and Robert L. Coster, "Pathological Gambling: Roots, Phases, and Treatment," *The Annals of the American Academy of Political and Social Science,* July 1984, pp. 146 ff.

# Nevada Economic Indicators

## Statewide Statistical Data

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | | | | | 3rd Quarter-1984 4th Quarter-1984 | 4th Quarter-1983 4th Quarter-1984 |
| Total Labor Force (000's) | 506.2† | 507.9† | 509.4 | 507.8 | + 1.8 | + 3.3 |
| Total Employment (000's) | 465.3† | 465.2† | 463.6 | 464.7 | + 1.1 | + 3.1 |
| Unemployment (000's) | 39.5† | 41.3† | 44.4 | 41.7 | + 10.4 | – 1.5 |
| Unemployment Rate | 7.8† | 8.1† | 8.7 | 8.2 | + 8.4 | – 1.6 |
| Unemployment Rate (Seasonally Adjusted) | 5.3† | 4.2† | 3.8 | 4.4 | – 39.0 | + 1.5 |
| Agricultural Empl. (000's) | 5.3† | 4.2† | 3.8 | 4.4 | – 33.3 | + 0.0 |
| Establishment Based Industrial Employment | | | | | | |
| Total All Industries (000's) | 424.3† | 426.3† | 424.3 | 425.0 | + .8 | + 1.8 |
| Mining | 6.6† | 6.6† | 6.5 | 6.6 | + 0.0 | + 4.8 |
| Contract Construction | 20.9† | 20.8† | 20.9 | 20.9 | – 1.1 | – 1.6 |
| Manufacturing | 20.1† | 20.1† | 20.4 | 20.2 | – 1.0 | + 2.7 |
| Transportation & Utilities | | | | | | |
| Transportation | 13.3† | 13.4† | 13.6 | 13.4 | + 0.0 | + .7 |
| Railroads | 1.4† | 1.4† | 1.4 | 1.4 | + 0.0 | + 0.0 |
| Air | 2.8† | 2.7† | 2.7 | 2.7 | – 6.8 | – 8.9 |
| Public Utilities | 11.1† | 11.2† | 11.2 | 11.2 | – .3 | – 3.2 |
| Total Trade | 84.6† | 86.0† | 87.2 | 85.9 | + 2.3 | + 2.5 |
| Wholesale Trade | 14.3† | 14.3† | 14.3 | 14.3 | + .5 | + 2.6 |
| Retail Trade | 70.3† | 71.7† | 72.9 | 71.6 | + 2.7 | + 2.5 |
| Finance, Ins., Real Estate | 19.0† | 19.2† | 19.2 | 19.1 | + .2 | – .9 |
| Service industries | 188.2† | 188.3† | 188.4 | 187.0 | – .6 | + 2.0 |
| Hotels, Amusement and Recreation Combined | 123.0† | 122.7† | 119.3 | 121.7 | – 1.1 | + 2.2 |
| Medical and Health | 15.1† | 15.2† | 15.2 | 15.2 | + .4 | – 2.2 |
| Total Government | 60.5† | 60.7† | 60.9 | 60.7 | + 5.6 | + 2.8 |
| Federal | 10.1† | 10.0† | 10.1 | 10.1 | – 4.4 | + 3.8 |
| State and Local | 50.4† | 50.7† | 50.8 | 50.6 | + 7.8 | + 2.6 |
| Education | 22.6† | 22.9† | 23.0 | 22.8 | + 21.9 | + 4.4 |
| Average Weekly Earnings in Selected Industries | | | | | | |
| Mining | 552.11† | 577.62† | 548.47 | 559.40 | + 1.4 | + 2.6 |
| Construction | 602.15† | 539.50† | 607.53 | 583.06 | – 3.8 | – .6 |
| Manufacturing | 367.60† | 370.24† | 384.71 | 374.18 | + 4.2 | + 2.5 |
| Public Utilities | 557.04† | 528.84† | 523.24 | 536.37 | + 4.1 | + 9.0 |
| Trade | 275.27† | 284.49† | 274.72 | 278.16 | + .2 | + 1.7 |
| Average Weekly Hours in Selected Industries | | | | | | |
| Mining | 42.7† | 43.3† | 41.9 | 42.6 | – 1.0 | – 2.0 |
| Construction | 36.1† | 33.2† | 35.8 | 35.0 | – 2.8 | + .1 |
| Manufacturing | 39.4† | 40.2† | 41.5 | 40.4 | + 3.2 | + 1.1 |
| Public Utilities | 44.0† | 40.9† | 41.2 | 42.0 | + 2.6 | + 4.3 |
| Trade | 33.9† | 34.4† | 34.0 | 34.1 | – .8 | – 1.5 |
| Average Hourly Earnings in Selected Industries | | | | | | |
| Mining | 12.93† | 13.34† | 13.09 | 13.12 | + 2.4 | + 4.7 |
| Construction | 16.68† | 16.25† | 16.97 | 16.63 | – 1.1 | – .8 |
| Manufacturing | 9.33† | 9.21† | 9.27 | 9.27 | + 1.0 | + 1.4 |
| Public Utilities | 12.66† | 12.93† | 12.70 | 12.76 | + 1.5 | + 4.5 |
| Trade | 8.12† | 8.27† | 8.08 | 8.16 | + .9 | + 3.3 |

# Statewide Statistical Data (Continued)

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE 3rd Quarter-1984 4th Quarter-1984 | PERCENT CHANGE 4th Quarter-1983 4th Quarter-1984 |
|---|---|---|---|---|---|---|
| Construction Activity | | | | | | |
| Residential ($000's) | 30,500 | 449,400 | 69,800 | 149,700 | – 19.9 | – 22.3 |
| Nonresidential ($000's) | 26,400 | 28,800 | 24,700 | 79,900 | + 45.0 | – 107.5 |
| Nonbuilding ($000's) | 15,900 | 9,400 | 21,600 | 46,900 | – 31.2 | – 13.5 |
| Total ($000's) | 72,800 | 87,600 | 116,100 | 276,500 | – 10.8 | – 3.1 |
| # of New Dwelling Units | 438 | 1,218 | 1,372 | 3,028 | – 14.0 | – 9.2 |
| Tax Collections ($) | | | | | | |
| Liquor | 1,426,326 | 1,160,223 | 948,729 | 3,535,278 | + 11.1 | + 4.2 |
| Cigarette | 1,531,381 | 1,700,719 | 1,659,403 | 4,891,503 | – 3.0 | + 23.8 |
| Fuel | 0 | 3,856,443 | 3,512,387 | 7,368,830 | – 39.9 | – 31.4 |
| Quarterly Taxable Sales ($000's) | – | – | – | 2,043,500 | + 4.5 | + 9.4 |
| Quarterly Gaming Revenues ($000's) | – | – | – | 741,066 | – 10.6 | + 2.8 |
| Highway Traffic Flow | | | | | | |
| 17 Selected Stations (Avg. Daily) | 112,073 | 100,495 | 96,775 | 103,114 | – 20.6 | + 3.9 |

† Revised.

# Las Vegas Standard Metropolitan Statistical Area

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE 3rd Quarter-1984 4th Quarter-1984 | PERCENT CHANGE 4th Quarter-1983 4th Quarter-1984 |
|---|---|---|---|---|---|---|
| Total Labor Force (000's) | 284.8† | 286.5† | 288.5 | 236.6 | + 2.7 | + 3.7 |
| Total Employment (000's) | 258.2† | 259.9† | 259.9 | 259.3 | + 2.6 | + 3.2 |
| Unemployment (000's) | 25.2† | 25.2† | 27.2 | 25.9 | + 4.2 | + 3.1 |
| Unemployment Rate | 8.9† | 8.8† | 9.4 | 9.0 | + 1.5 | – .7 |
| Unemployment Rate (Seasonally Adjusted) | 9.6† | 9.2† | 8.9 | 9.2 | + 0.0 | – 0.1 |
| Agricultural Employment (000's) | .9† | .7† | .7 | .8 | – 34.3 | + 0.0 |
| Establishment Based Industrial Employment | | | | | | |
| Total All Industries (000's) | 237.7† | 240.1† | 239.8 | 239.2 | + 1.9 | + 1.5 |
| Mining | .3† | .3† | .4 | .3 | – 9.1 | + 11.1 |
| Contract Construction | 12.6† | 12.6† | 13.0 | 12.7 | + 0.0 | – 1.0 |
| Manufacturing | 7.7† | 7.7† | 7.9 | 7.8 | + 0.0 | + 4.0 |
| Transportation & Utilities | | | | | | |
| Transportation | 8.0† | 8.1† | 8.2 | 8.1 | – .8 | – .4 |
| Railroads | .5† | .5† | .5 | .5 | + 0.0 | + 0.0 |
| Air | 2.3† | 2.2† | 2.2 | 2.2 | – 8.2 | – 10.7 |
| Public Utilities | 5.8† | 5.9† | 5.9 | 5.9 | + .6 | – 3.3 |
| Total Trade | 47.8† | 48.7† | 49.5 | 48.7 | + 2.5 | + 1.5 |
| Wholesale Trade | 7.1† | 7.2† | 7.2 | 7.2 | + 1.9 | + 3.9 |
| Retail Trade | 40.7† | 41.5† | 42.3 | 41.5 | + 3.5 | + 1.1 |
| Finance, Ins., Real Estate | 11.1† | 11.3† | 11.2 | 11.2 | + .9 | + 1.5 |
| Service Industries | 115.4† | 116.3† | 114.4 | 115.4 | + .8 | + 1.3 |
| Hotels, Gaming & Recreation | 74.4† | 74.8† | 73.3 | 74.2 | + .8 | + 1.0 |
| Total Government | 29.0† | 29.2† | 29.3 | 29.2 | + 15.0 | + 4.4 |
| Federal | 5.2† | 5.2† | 5.2 | 5.2 | – 2.5 | + 6.1 |
| State and Local | 23.8† | 24.0† | 24.1 | 24.0 | + 11.3 | + 4.1 |
| Education | 11.4† | 11.5† | 11.6 | 11.5 | + 27.8 | + 5.2 |
| Construction Activity | | | | | | |
| Las Vegas | | | | | | |
| Residential ($000's) | 2,653 | 8,890 | 9,039 | 20,582 | – 8.5 | – 23.1 |
| Nonresidential ($000's) | 4,455 | 17,728 | 4,089 | 26,272 | + 16.7 | + 0.2 |
| Total Value ($000's) | 7,108 | 26,618 | 13,128 | 46,854 | + 13.8 | – 0.2 |
| # of New Family Units | 66 | 288 | 513 | 867 | + 18.8 | – 13.0 |
| North Las Vegas | | | | | | |
| Residential ($000's) | 269 | 894 | 894 | 2,057 | + 165.4 | – 62.6 |
| Nonresidential ($000's) | 1,344 | 487 | 868 | 2,699 | – 48.0 | + 152.0 |
| Total Value ($000's) | 1,613 | 1,330 | 2,601 | 5,594 | – 6.2 | – 14.9 |
| # of Permits | 45 | 63 | 35 | 143 | + 25.4 | – 4.0 |
| Energy Consumption | | | | | | |
| Sales (000's KWH) | 423,627 | 429,342 | 526,100 | 1,379,069 | – 29.6 | + 7.2 |
| # of Customers | 222,576 | 223,656 | 224,632 | 223,621 | + 1.0 | + 4.8 |
| Taxable Sales ($000's) | – | – | – | 1,115,492 | – 11.4 | + 6.7 |
| Gaming Revenues ($000's) | – | – | – | 504,990 | – 1.4 | + 1.7 |
| Air Transportation-McCarran | | | | | | |
| Passengers (Arr. & Depart.) | 980,260 | 883,921 | 691,985 | 2,556,166 | – 1.4 | + 2.1 |
| Cargo Enplaned (lbs.) | 1,557,951 | 1,726,417 | 2,093,258 | 5,377,626 | + 31.5 | + 51.7 |
| Cargo Deplaned (lbs.) | 2,558,183 | 2,912,832 | 2,908,264 | 8,379,279 | + 30.4 | + 53.4 |
| Highway Traffic Flow | | | | | | |
| 4 Selected Stations (Avg. Daily) | 31,103 | 32,740 | 30,250 | 31,364 | – 13.3 | + 6.6 |
| Room Tax ($) | | | | | | |
| Clark County | 2,104,310 | 1,838,794 | 1,318,673 | 5,261,777 | – 1.5 | + 8.2 |
| Las Vegas City | 307,360 | 274,113 | 223,082 | 804,555 | – 8.0 | + 8.0 |
| SMSA Total | 2,419,890 | 2,121,525 | 1,548,360 | 6,089,775 | – 2.4 | + 8.1 |

†Revised.

# Reno Standard Metropolitan Statistical Area

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE | |
|---|---|---|---|---|---|---|
| | | | | | 3rd Quarter-1984 4th Quarter-1984 | 4th Quarter-1983 4th Quarter-1984 |
| Total Labor Force (000's) | 137.1† | 137.8† | 137.9 | 137.6 | + 1.9 | + 2.5 |
| Total Employment (000's) | 129.3† | 128.9† | 128.4 | 128.9 | + .6 | + 2.8 |
| Unemployment (000's) | 7.8† | 8.9† | 9.5 | 8.7 | + 24.2 | − 1.1 |
| Unemployment Rate | 5.7† | 6.5† | 6.9 | 6.4 | + 22.4 | − 4.0 |
| Unemployment Rate (Seasonally Adjusted) | 6.4† | 6.7† | 6.6 | 6.6 | + 11.9 | − 3.9 |
| Agricultural Employment (000's) | .6† | .5† | .4 | .5 | − 34.8 | + 0.0 |
| Establishment Based Industrial Employment | | | | | | |
| Total All Industries (000's) | 118.0† | 118.1† | 117.5 | 117.9 | + .3 | + 1.9 |
| Mining | .8† | .7† | .7 | .7 | − 4.3 | + 4.8 |
| Contract Construction | 5.5† | 5.3† | 5.1 | 5.3 | − 5.4 | − 6.5 |
| Manufacturing | 7.8† | 7.8† | 7.9 | 7.8 | + 0.0 | + .9 |
| Transportation & Utilities | | | | | | |
| Transportation | 4.0† | 4.0† | 4.1 | 4.0 | + 1.7 | + 3.4 |
| Railroads | .4† | .4† | .4 | .4 | + 0.0 | + 0.0 |
| Public Utilities | 3.9† | 3.9† | 3.9 | 3.9 | − 2.5 | − 4.9 |
| Total Trade | 26.1† | 26.6† | 27.2 | 26.6 | + 2.7 | + 4.3 |
| Wholesale Trade | 6.1† | 6.1† | 6.1 | 6.1 | − 1.6 | + 1.7 |
| Retail Trade | 20.0† | 20.5† | 21.1 | 20.5 | + 4.1 | + 5.1 |
| Finance, Ins., Real Estate | 5.9† | 5.9† | 6.0 | 5.9 | − 1.1 | − 5.8 |
| Service Industries | 47.0† | 46.7† | 45.3 | 46.3 | − 1.9 | + 3.4 |
| Hotels, Gaming & Recreation | 30.6† | 30.2† | 28.9 | 29.9 | − 2.6 | + 5.0 |
| Total Government | 17.0† | 17.2† | 17.3 | 17.2 | + 5.7 | + 1.8 |
| Federal | 2.9† | 2.9† | 2.9 | 2.9 | + 0.0 | + 3.6 |
| State and Local | 14.1† | 14.3† | 14.4 | 14.3 | + 7.0 | + 1.4 |
| Education | 7.2† | 7.3† | 7.3 | 7.3 | + 16.0 | + 3.3 |
| Construction Activity | | | | | | |
| Reno | | | | | | |
| Residential ($000's) | 7,664 | 3,301 | 10,050 | 21,015 | + 13.4 | + 86.5 |
| Nonresidential ($000's) | 3,962 | 900 | 1,058 | 5,920 | − 82.7 | − 2.4 |
| Total Value ($000's) | 11,626 | 4,201 | 11,108 | 26,935 | − 48.9 | + 46.9 |
| # of New Family Units | 85 | 34 | 63 | 182 | − 45.2 | + 36.5 |
| Sparks | | | | | | |
| Residential ($000's) | 4,429 | 1,731 | 6,680 | 12,840 | + 279.1 | + 230.2 |
| Nonresidential ($000's) | 3,790 | 1,298 | 1,640 | 6,728 | + 129.2 | + 122.1 |
| Total Value ($000's) | 8,219 | 3,029 | 8,320 | 19,568 | + 209.5 | + 182.9 |
| # of New Family Units | 36 | 36 | 30 | 102 | + 41.7 | + 12.1 |
| Washoe County (Unincorporated) | | | | | | |
| Residential ($000's) | 2,785 | 1,648 | 5,904 | 10,337 | − 9.1 | − 26.2 |
| Nonresidential ($000's) | 4,410 | 1,377 | 1,041 | 6,828 | − 15.3 | + 54.4 |
| Total Value ($000's) | 7,195 | 3,025 | 6,945 | 17,165 | − 11.6 | − 6.8 |
| # of New Family Units | 32 | 19 | 97 | 148 | + 2.1 | + 13.0 |
| Taxable Sales ($000's) | – | – | – | 489,811 | − 2.1 | + 8.3 |
| Gaming Revenues ($000's) | – | – | – | 146,543 | − 19.7 | + 5.2 |
| Air Transportation-Reno | | | | | | |
| Passengers (Arr. & Depart.) | 239,887 | 219,820 | 207,255 | 666,962 | − 5.2 | − 4.3 |
| Cargo Enplaned (lbs.) | 761,325 | 694,300 | 893,334 | 2,348,959 | + 53.0 | + 11.7 |
| Cargo Deplaned (lbs.) | 701,915 | 664,645 | 833,866 | 2,200,426 | + 21.8 | − 7.2 |
| Highway Traffic Flow | | | | | | |
| 7 Selected Stations (Avg. Daily) | 65,679 | 55,537 | 55,630 | 58,948 | − 21.0 | − 1.9 |
| Room Tax ($) | | | | | | |
| Washoe County | 96,405 | 59,760 | 52,852 | 209,017 | − .5 | + 2.2 |
| Reno | 972,914 | 868,781 | 605,781 | 2,447,476 | − 7.7 | + 9.3 |
| Sparks | 67,979 | 58,731 | 41,261 | 167,971 | − 8.7 | + 13.8 |
| SMSA Total | 1,137,298 | 987,272 | 699,894 | 2,824,464 | − 10.1 | + 9.0 |

† Revised

# Nevada Statistical Data by County

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE 3rd Quarter-1984 4th Quarter-1984 | PERCENT CHANGE 4th Quarter-1983 4th Quarter-1984 |
|---|---|---|---|---|---|---|
| **CARSON CITY** | | | | | | |
| Total Labor Force | 20,930† | 21,020† | 21,080 | 21,010 | + 0.1 | + 0.2 |
| Total Employment | 19,250† | 19,130† | 19,000 | 19,126 | − .2 | + 2.3 |
| Unemployment | 1,680† | 1,890† | 2,080 | 1,883 | + 20.2 | + 2.2 |
| Unemployment Rate | 8.0† | 9.0† | 9.9 | 9.0 | + 19.0 | + 0.0 |
| Construction Activity | | | | | | |
| Residential Value ($000's) | 338 | 951 | 344 | 1,633 | − 71.4 | − 56.8 |
| Nonresidential Value ($000's) | 1,165 | 141 | 478 | 1,784 | − 54.3 | − 9.5 |
| Total Value ($000's) | 1,503 | 1,092 | 822 | 3,417 | − 64.4 | − 40.6 |
| # of New Family Units | 4 | 10 | 4 | 18 | − 75.0 | − 72.5 |
| Taxable Sales ($000's) | − | − | − | 69,019 | + 1.8 | + 9.1 |
| Gaming Revenues ($000's) | − | − | − | 8,448 | − 30.1 | − .2 |
| **CHURCHILL** | | | | | | |
| Total Labor Force | 6,890† | 6,680† | 6,780 | 6,783 | − 2.8 | − 2.5 |
| Total Employment | 6,220† | 6,050† | 5,980 | 6,083 | − 4.3 | + 3.6 |
| Unemployment | 670† | 630† | 800 | 700 | + 12.9 | − 6.3 |
| Unemployment Rate | 9.7† | 9.5† | 11.8 | 10.3 | + 23.5 | − 8.0 |
| Construction Activity | | | | | | |
| Residential Value ($000's) | 366 | 142 | 166 | 674 | − 30.4 | + 3.5 |
| Nonresidential Value ($000's) | 0 | 267 | 0 | 267 | + 79.2 | − 54.9 |
| Total Value ($000's) | 366 | 409 | 166 | 941 | − 15.8 | − 24.3 |
| # of New Family Units | 5 | 3 | 2 | 10 | − 9.1 | + 42.9 |
| Taxable Sales ($000's) | − | − | − | 20,999 | + 7.5 | + 20.8 |
| Gaming Revenues ($000's) | − | − | − | 1,202 | − 4.8 | + 1.9 |
| **DOUGLAS** | | | | | | |
| Total Labor Force | 9,120† | 9,000† | 8,780 | 8,966 | − 2.5 | − 2.8 |
| Total Employment | 8,550† | 8,350† | 8,150 | 8,350 | − 3.7 | + 2.5 |
| Unemployment | 570† | 650† | 630 | 616 | + 18.6 | + 6.9 |
| Unemployment Rate | 6.3† | 7.2† | 7.2 | 6.9 | + 22.5 | + 4.5 |
| Taxable Sales ($000's) | − | − | − | 50,818 | − 25.1 | − 7.9 |
| Gaming Revenues ($000's) | − | − | − | 58,792 | − 36.2 | + 4.1 |
| **ELKO** | | | | | | |
| Total Labor Force | 13,710† | 13,580† | 13,420 | 13,570 | − .6 | + 4.0 |
| Total Employment | 12,840† | 12,550† | 12,300 | 12,563 | − 3.4 | + 3.1 |
| Unemployment | 870† | 1,030† | 1,120 | 1,006 | + 54.1 | + 17.1 |
| Unemployment Rate | 6.3† | 7.6† | 8.3 | 7.4 | + 55.2 | + 12.1 |
| Construction Activity | | | | | | |
| Elko City | | | | | | |
| Residential ($000's) | 197 | 210 | 6 | 413 | − 78.5 | − 17.9 |
| Nonresidential ($000's) | 450 | 250 | 27 | 727 | − 56.1 | − 71.7 |
| Total Value ($000's) | 647 | 460 | 33 | 1,140 | − 68.1 | − 62.9 |
| # of New Dwelling Units | 4 | 3 | 0 | 7 | − 76.7 | − 50.0 |
| Taxable Sales ($000's) | − | − | − | 49,486 | − 8.3 | + 22.6 |
| Gaming Revenues ($000's) | − | − | − | 14,882 | − 28.0 | + 17.5 |
| **ESMERALDA** | | | | | | |
| Total Labor Force | 420† | 440† | 420 | 426 | + 6.7 | + 4.9 |
| Total Employment | 350† | 350† | 350 | 350 | + 0.0 | + 4.0 |
| Unemployment | 70† | 90† | 70 | 76 | + 53.3 | + 9.5 |
| Unemployment Rate | 15.6† | 19.8† | 17.2 | 17.5 | + 39.2 | + 3.5 |
| Taxable Sales ($000's) | − | − | − | 1,659 | − 43.7 | − 3.4 |
| **EUREKA** | | | | | | |
| Total Labor Force | 880† | 750† | 740 | 763 | − 11.9 | + 3.6 |
| Total Employment | 750† | 690† | 670 | 703 | − 14.6 | + 5.5 |
| Unemployment | 50† | 60† | 70 | 60 | + 38.5 | − 14.3 |
| Unemployment Rate | 5.9† | 8.4† | 9.9 | 8.1 | + 54.1 | − 12.9 |
| Taxable Sales | − | − | − | 1,659 | − 43.7 | − 3.4 |

# Nevada Statistical Data by County (Continued)

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE 3rd Quarter-1984 4th Quarter-1984 | PERCENT CHANGE 4th Quarter-1983 4th Quarter-1984 |
|---|---|---|---|---|---|---|
| HUMBOLDT | | | | | | |
| Total Labor Force | 5,680† | 5,520† | 5,470 | 5,556 | – 6.7 | + .7 |
| Total Employment | 5,200† | 5,030† | 4,940 | 5,056 | – 8.5 | + 1.1 |
| Unemployment | 480† | 490† | 530 | 500 | + 16.3 | – 3.2 |
| Unemployment Rate | 8.4† | 8.8† | 9.6 | 8.9 | + 23.5 | – 4.6 |
| Taxable Sales ($000's) | – | – | – | 22,645 | – 2.2 | – 17.3 |
| Gaming Revenues ($000's) | – | – | – | 1,945 | – 29.7 | – 8.4 |
| LANDER | | | | | | |
| Total Labor Force | 2,600† | 2,570† | 2,530 | 2,566 | – 2.9 | + 7.4 |
| Total Employment | 2,460† | 2,410† | 2,380 | 2,416 | – 3.1 | + 10.7 |
| Unemployment | 140† | 160† | 150 | 150 | + 0.0 | – 27.4 |
| Unemployment Rate | 5.2† | 6.1† | 6.0 | 5.8 | + 0.0 | – 33.2 |
| Taxable Sales ($000's) | – | – | – | 8,337 | – 36.7 | + 2.8 |
| LINCOLN | | | | | | |
| Total Labor Force | 2,570† | 2,600† | 2,560 | 2,567 | – 1.2 | + .7 |
| Total Employment | 2,450† | 2,420† | 2,420 | 2,430 | – 1.2 | + 1.4 |
| Unemployment | 120† | 180† | 140 | 146 | – 0.0 | – 10.2 |
| Unemployment Rate | 4.7† | 6.9† | 5.4 | 5.7 | + 2.4 | – 12.8 |
| Taxable Sales ($000's) | – | – | – | 2,010 | + 4.9 | + 1.8 |
| LYON | | | | | | |
| Total Labor Force | 6,080† | 6,000† | 6,000 | 6,026 | – 2.9 | + 8.7 |
| Total Employment | 5,530† | 5,390† | 5,320 | 5,413 | – 4.4 | + 8.2 |
| Unemployment | 500† | 610† | 680 | 613 | + 21.9 | + 12.9 |
| Unemployment Rate | 9.0† | 10.2† | 11.3 | 10.2 | + 25.0 | + 3.7 |
| Taxable Sales ($000's) | – | – | – | 13,822 | + 3.3 | + 20.5 |
| MINERAL | | | | | | |
| Total Labor Force | 3,890† | 3,870† | 3,880 | 3,880 | – .8 | + 1.2 |
| Total Employment | 3,660† | 3,620† | 3,620 | 3,633 | – 1.0 | + .9 |
| Unemployment | 230† | 250† | 260 | 246 | + 2.8 | + 5.7 |
| Unemployment Rate | 5.9† | 6.5† | 6.7 | 6.4 | + 218.3 | + 5.5 |
| Taxable Sales ($000's) | – | – | – | 5,339 | – 40.0 | + .7 |
| NYE | | | | | | |
| Total Labor Force | 3,720† | 3,790† | 3,770 | 3,760 | + .9 | + 4.6 |
| Total Employment | 3,500† | 3,450† | 3,440 | 3,463 | + .3 | + 2.4 |
| Unemployment | 220† | 340† | 330 | 296 | + 8.5 | + 41.3 |
| Unemployment Rate | 6.0† | 8.9† | 8.8 | 7.9 | + 8.2 | + 36.2 |
| Taxable Sales ($000's) | – | – | – | 18,647 | – 6.0 | + 6.6 |
| Gaming Revenues ($000's) | – | – | – | 1,243 | – .5 | – 1.8 |
| PERSHING | | | | | | |
| Total Labor Force | 1,880† | 1,830† | 1,850 | 1,853 | – 3.6 | + 1.8 |
| Total Employment | 1,810† | 1,750† | 1,740 | 1,766 | – 5.0 | + 2.7 |
| Unemployment | 70† | 80† | 110 | 86 | + 36.8 | – 13.3 |
| Unemployment Rate | 3.9† | 4.3† | 6.1 | 4.8 | + 43.0 | – 14.4 |
| Taxable Sales ($000's) | – | – | – | 3,634 | – 13.9 | + 14.5 |

† Revised.

# Nevada Statistical Data by County (Continued)

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE 3rd Quarter-1984 4th Quarter-1984 | PERCENT CHANGE 4th Quarter-1983 4th Quarter-1984 |
|---|---|---|---|---|---|---|
| STOREY | | | | | | |
| Total Labor Force | 1,320† | 1,280† | 1,190 | 1,263 | − 10.0 | − 2.8 |
| Total Employment | 1,140† | 1,080† | 1,010 | 1,076 | − 12.0 − | 1.5 |
| Unemployment | 180† | 200† | 180 | 186 | + 3.7 | − 9.7 |
| Unemployment Rate | 13.7† | 15.6† | 15.1 | 14.8 | + 14.4 | − 6.7 |
| Taxable Sales ($000's) | − | − | − | 1,868 | − 45.2 | + 10.7 |
| Gaming Revenues ($000's) | − | − | − | 397 | − 56.6 | − .5 |
| WHITE PINE | | | | | | |
| Total Labor Force | 4,670† | 4,660† | 4,620 | 4,650 | − .7 | + .9 |
| Total Employment | 4,100† | 4,070† | 4,050 | 4,073 | − 1.1 | + 6.3 |
| Unemployment | 570† | 590† | 570 | 576 | + 2.4 | − 25.4 |
| Unemployment Rate | 12.3† | 12.7† | 12.4 | 12.5 | + 4.2 | − 25.6 |
| Construction Activity | | | | | | |
| Total Value ($000's) | 72 | 144 | 22 | 238 | − 57.6 | − 81.3 |
| # of Permits | 23 | 26 | 8 | 57 | − 37.4 | + 14.0 |
| Taxable Sales ($000's) | − | − | − | 12,224 | + 3.2 | + 10.2 |
| Gaming Revenues ($000's) | − | − | − | 444 | − 23.2 | − 1.1 |

† Revised.

# Selected U.S. Economic Indicators

## Consumer Price Index & Indexes of Selected Categories All Urban Consumers (1967 = 100%)

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE<br>3rd Quarter-1984 4th Quarter-1984 | PERCENT CHANGE<br>4th Quarter-1983 4th Quarter-1984 |
|---|---|---|---|---|---|---|
| All Items | 315.3 | 315.3 | 315.5 | 315.4 | + .7 | + 4.1 |
| Food | 304.4 | 304.1 | 305.1 | 304.5 | + .2 | + 3.9 |
| Housing | 341.2 | 340.9 | 341.2 | 341.1 | + .4 | + 4.3 |
| Apparel and Upkeep | 205.7 | 205.2 | 203.2 | 204.7 | + 2.2 | + 2.2 |
| Transportation | 315.5 | 316.1 | 315.8 | 315.8 | + .8 | + 3.2 |
| Medical Care | 385.5 | 387.5 | 388.5 | 387.2 | + 1.4 | + 6.2 |

## Producer Price Indexes for Selected Commodity Groupings (1967 = 100%)

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE<br>3rd Quarter-1984 4th Quarter-1984 | PERCENT CHANGE<br>4th Quarter-1983 4th Quarter-1984 |
|---|---|---|---|---|---|---|
| All Commodities | 309.4 | 310.4 | 309.9 | 309.9 | − .3 | + 1.3 |
| Fuel and Power | 654.5 | 655.3 | 648.9 | 652.9 | − 1.2 | − 2.2 |
| Machinery and Equipment | 295.0 | 295.7 | 295.6 | 295.4 | + .4 | + 2.5 |
| Metals and Metal Products | 315.4 | 316.2 | 315.3 | 315.6 | − .0 | + 1.6 |
| Nonmetallic Mineral Products | 339.6 | 339.5 | 339.9 | 339.7 | − .1 | + 3.3 |
| Textile Products & Apparel | 209.6 | 210.0 | 209.8 | 209.8 | − .4 | + 1.4 |

## U.S. Labor Force

| | October 1984 | November 1984 | December 1984 | 4th Quarter 1984 | PERCENT CHANGE<br>3rd Quarter-1984 4th Quarter-1984 | PERCENT CHANGE<br>4th Quarter-1983 4th Quarter-1984 |
|---|---|---|---|---|---|---|
| Civilian Labor Force (000's) | 114,016 | 114,074 | 114,464 | 114,184 | + .4 | + 2.0 |
| Total Employment (000's) | 105,649 | 105,932 | 106,273 | 105,951 | + .7 | + 3.0 |
| Unemployment (000's) | 8,367 | 8,142 | 8,191 | 8,233 | − 3.2 | − 10.2 |
| Unemployment Rate | 7.3 | 7.1 | 7.2 | 7.2 | − 3.6 | − 77.7 |
| Unemployment Rate (Seasonally Adjusted) | 7.3 | 7.1 | 7.2 | 7.2 | − 3.6 | − 15.0 |

The Bureau of Business and Economic Research of the University of Nevada, Reno, will be publishing:

## THE GAMBLING STUDIES: PROCEEDINGS OF THE SIXTH NATIONAL CONFERENCE ON GAMBLING AND RISK TAKING

edited by William R. Eadington
Professor of Economics, University of Nevada Reno

THE GAMBLING STUDIES will include all the professional and scholarly papers that were presented at the Sixth National Conference on Gambling and Risk Taking. The Conference, which was held in Atlantic City, New Jersey, in December, 1984, was cosponsored by the Bureau of Business and Economic Research of the University of Nevada, Reno, and the American Studies Program of the Pennsylvania State University. Altogether, THE GAMBLING STUDIES, which is being issued in five volumes, includes nearly 100 papers.

The following is a price list of the volumes of THE GAMBLING STUDIES. All volumes are hardbound:

VOLUME 1: GAMBLING AND PUBLIC POLICY: ISSUES IN THE UNITED STATES AND ABROAD
Eighteen papers, Price: $40.00

VOLUME 2: CASINO GAMBLING: BUSINESS AND ECONOMIC ISSUES
Sixteen papers, Price: $35.00

VOLUME 3: SOCIAL, BEHAVIORAL AND ECONOMIC INTERPRETATIONS OF GAMBLERS AND GAMBLING BEHAVIOR
Eighteen papers, Price: $35.00

VOLUME 4: INVESTMENTS, WAGERS AND GAMING: MATHEMATICAL AND STRUCTURAL ANALYSIS OF GAMBLING OPPORTUNITIES
Twenty papers, Price: $40.00

VOLUME 5: THE PHENOMENON OF PATHOLOGICAL GAMBLING: PSYCHOLOGICAL THEORIES AND TREATMENT STRATEGIES
Twenty papers, Price: $40.00

TOTAL SET OF FIVE VOLUMES, Price: $180.00

Orders must be accompanied by payment in full or a purchase order. Checks should be made payable to the BOARD OF REGENTS and sent to:

Bureau of Business and Economic Research
**THE GAMBLING STUDIES**
University of Nevada, Reno
Reno, Nevada 89557-0016

Abstracts of the papers presented at the Conference are available from the Bureau on request at a price of $3.00. For further information, write the Bureau or call (702) 784-6877.

## DATA SOURCES

*Information for statistical tables were developed in cooperation with the following sources:*

Bell Telephone Company of Nevada; California Pacific Utilities Co.; Central Telephone Co.; Churchill County Telephone & Telegraph System; Continental Telephone Co.; F. W. Dodge Co.; Elko City Engineer; City of Fallon; Federal Reserve Bank of San Francisco; First American Title Co. of Nevada (Reno); Lake Mead National Recreation Area; Las Vegas Convention Authority; Las Vegas Dept. of Building & Safety; Lincoln County Telephone System; McCarran International Airport; Moapa Valley Telephone Co.; Mt. Wheeler Power Co.; Nevada Dept. of Highways; Nevada Department of Taxation - Cigarette, Liquor, Fuel, and Sales and Use Tax Divisions; Nevada Employment Security Dept.; Nevada Gaming Commission; Nevada Power Co. - Las Vegas and Elko Divisions; Nevada Telephone & Telegraph Co.; North Las Vegas Building Dept.; Reno Building Inspection Dept.; Reno International Airport; Reno-Sparks Convention Authority; Rio Virgin Telephone Co.; Sparks Convention Authority; Rio Virgin Telephone Co.; Sierra Pacific Power Co.; Sparks Building Dept.; U.S. Dept. of Agriculture-Statistical Reporting Service; U.S. Dept. of Commerce-Bureau of Economic Analysis; Dept. of Labor - Bureau of Labor Statistics; White Pine County Regional Planning Commission.